

DMS-DR-1152
SEPTEMBER 1971
CR-119199

—SPACE SHUTTLE—

VERIFICATION OF BOOSTER TRANSITION CHARACTERISTICS FOR TRANSONIC AND SUPERSONIC MACH NUMBERS

(M=0.6–5.0)

by

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MSFC 14-INCH
TRANSONIC WIND TUNNEL

MARSHALL
SPACE FLIGHT CENTER

N A S A

SADSAC SPACE SHUTTLE
AEROTHERMODYNAMIC
DATA MANAGEMENT SYSTEM

CONTRACT NAS3-4016
MARSHALL SPACE FLIGHT CENTER



(NASA-CR-119199) SPACE SHUTTLE:
VERIFICATION OF BOOSTER TRANSITION
CHARACTERISTICS FOR TRANSONIC AND
SUPERSONIC MACH W.V. Carter, et al
(Chrysler Corp.) Sep. 1971 475 p CSCI 22B G3/31

N72-10941

Unclass
08702

FACILITY FORM 602

(ACCESSION NUMBER)

475

(PAGES)

199

(NASA CR OR TMX OR AD NUMBER)

CR-119199

(THRU)

63

(CODE)

31

(CATEGORY)

SADSAC/SPACE SHUTTLE
WIND TUNNEL TEST DATA REPORT

CONFIGURATION: GD/Convair Aerospace, B9U Booster; .0035 Scale

TEST PURPOSE: Verification Tests on Booster Transition Characteristics
in the Transonic and Supersonic Mach Range.

TEST FACILITY: NASA/MSFC 14 x 14 Inch Trisonic Wind Tunnel

TESTING AGENCY: General Dynamic Convair Aerospace

TEST NO. & DATE: MSFC TWT 493; May 26 - June 2, 1971

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CONTRACT NAS 8-4016

AMENDMENT 153

DRL 184 - 58

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ABSTRACT

This report presents the results of the General Dynamics/Convair B-90 booster verification wind tunnel test. These tests were conducted in the Marshall Space Flight Center's 14 x 14-inch trisonic wind tunnel utilizing a .0035 scale model during May-June 1971. The nominal Mach numbers tested were 0.6, 0.9, 0.95, 1.0, 1.05, 1.20, 1.50, 2.0, 2.74, 3.00, 4.50 and 5.0. The angle-of-attack range was $+5^{\circ}$ to 40° . The yaw data was obtained over a range of -10° to $+10^{\circ}$ at fixed angles-of-attack of 0° , 6° , 15° , 25° , and 30° . The Reynolds number range was 4.2 to 6.9 million per foot. Results include elevon and canard effectiveness in pitch and rudder, aileron, body flap and tail effectiveness in yaw.

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SUMMARY

Experimental aerodynamic investigations have been conducted in the NASA/MSFC 14 x 14 inch Trisonic Wind Tunnel on a 0.0035 scale model of the General Dynamics Convair (GD/C) proposed space shuttle booster, B9U. Six component force and moment data were recorded and are presented herein in coefficient form for both the body and stability axis systems. The data spanned a Mach number range from .6 to 4.96 and for an angle of attack range from 5° to 40° at 0° sideslip and -10° to 10° sideslip at 0° , 6° , 15° , 25° , 30° angle of attack. Primary configuration variables during these tests were control surface deflections which included the elevon deflected $\pm 10^\circ$ and -20° , aileron deflection of $\pm 10^\circ$, canard deflections of -15° and -30° , rudder deflection of 10° , and rudder flare deflections of 40° and 60° .

The measured value of C_Y , C_{Y_N} , and C_{B_L} in dataset Z35FCE at Mach number of 1.94 and 4 degrees angle of sideslip were determined as faulty data. The considered data was removed, and the values presented for the aforementioned coefficients are interpolated values between 2 and 6 degrees angle of sideslip respectively.

TABLE I. SADSAC NOMENCLATURE OF AERODYNAMIC COEFFICIENTS

COEFFICIENT	COEFFICIENT NAME	SADSAC NOMENCLATURE		
		BODY AXIS	STABILITY AXIS	WIND AXIS
C_A	Total Axial Force	CA	-	-
C_{AB}	Base Axial Force	CAB	--	-
C_{AF}	Forebody Axial Force	CAF	-	-
C_D	Total Drag Force	-	CD	CDTOTL
C_{DB}	Base Drag Force	-	CDB	CDBASE
C_{DF}	Forebody Drag Force	-	CDF	CDFORE
C_L	Lift Force	-	CL	CL
C_N	Normal Force	CN	-	-
C_Y	Side Force	CY	CY	CC
C_l	Rolling Moment	CBL	CSL	CWL
C_m	Pitching Moment	CLM	CLM	CPM
C_n	Yawing Moment	CYN	CLN	CLN
L/D	Lift-To-Drag Force Ratio	-	L/D	CL/CD
L/D	Lift-To-Forebody Drag Force Ratio	-	L/DF	CL/CDF
N/A	Normal-To-Axial Force Ratio	N/A	-	-
N/A	Normal-To-Forebody Axial Force Ratio	CN/CAF	-	-

CONFIGURATIONS INVESTIGATED

The components and combinations of components tested are listed below.

<u>Symbol</u>	<u>Description</u>	<u>Dwg. No.</u>
B ₂₅	Basic body with length of 248.3 ft. (F.S.) and maximum width of 36 ft (F.S.) at tank \bar{c} . (Same as B ₂₂ R ₄)	WT-71-106302
W ₁₉	Delta wing with 53° LE sweepback and an unswept T.E. with a wing-body fillet and with different airfoils at theo. root, body junction, break and tip	WT-71-106303
C ₈	Delta canard with 60° LE sweep full scale exposed area of 503.99 sq. ft., taper ratio .1055, pivot Pt. @56% C _R at Fuse. Sta. 2024" and W.L. 450" full scale.	WT-71-106302
V ₁₀	Vertical tail with 35° LE sweep, at taper ratio of 0.5 and a full scale area of 1500 sq. ft.	WT-71-106303
R ₄	Rocket engines for B-9U booser, outside (8) engines only with part of top 2 engines removed for high α blade.	WT-71-106302
F _{7L}	Small left hand body flap with full scale area of 75 ft ² (T.E. of flaps match T.E. of wing in retracted position) swept back of flap H.L. is 50°, flap deflections are 20°, 40°, and 60°.	WT-71-106302
F _{8L}	Same as F _{7L} except full scale area is 150 ft ² , with only a 40° flap deflection.	WT-71-106302
L ₁	Indicates vertical tail removed at high angles of attack and on the model for low angles, when high and low angles are plotted together. (B ₂₅ W ₁₉ C ₈ V ₁₀ L ₁)	

COMBINATIONS TESTED

B₂₅W₁₉C₈

B₂₅W₁₉C₈V₁₀

B₂₅W₁₉C₈F₇

B₂₅W₁₉C₈F₈

NOTE: B₂₅W₁₉C₈V₁₀^L indicates vertical tail removed at high angles when high and low angle data are plotted together

The above configurations were tested at elevon deflections of +10°, 0°, -10° and -20°, aileron deflections of 0° and +10°, canard deflections of 0°, -15°, and -30°, rudder deflections of 0° and 10°, and body flap deflections of 0°, 40° and 60° for small body flap and only 40° for the large body flap. Two sting arrangements were utilized to test the models at an angle of attack range of +5° to 40°. The yaw range was -10° to +10° or -4° to +10° depending upon the sting support.

TEST MSFC TW7493 DATA SET/RUN NUMBER
COLLATION SUMMARY

☐ PRETEST 8
☒ POSTTEST

DATA SET IDENTIFIER		CONFIGURATION		SCHD.		PARAMETERS/VALUES						NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
				a	B	dc	da	de	df		0.60		0.90	0.95	1.0	1.05	1.20	1.50	2.0	2.74	3.0	4.5	5.0
R35EAO	B25 W19 C8 V10	A	0	0	0	0	0	0	0	10	35	36	37	38	39	40	62	1	65	64			
EBO	B25 W19 C8	B						0		3								94		100	99		
EAA	B25 W19 C8 V10	A						10		8	88	43		42		41		2	68	67			66
EBA	B25 W19 C8	B						10		2										102	101		
EAB	B25 W19 C8 V10	A						-20		7	89	44		45		46		3	70	69			
EBB	B25 W19 C8	B						-20		2										104	103		
EAC	B25 W19 C8 V10	A		0				-10		6		49		48		47		4	72	71			
CAA	B25 W19 C8 V10	A		-15				0		4		50		51		52		5					
CBA	B25 W19 C8	B		-15						2										108	107		
CAB	B25 W19 C8 V10	A		-30						6		55	54			53		6		74			73
CBB	B25 W19 C8	B	0	-30						2										110	109		
OCA	B25 W19 C8	30	C	0						3										112	111	118	
OCB	B25 W19 C8	25								6		90		91		92		93		106			105
TCC	B25 W19 C8 V10	15								6				28		29	56	7		76			75
TCD	B25 W19 C8 V10	6	C							4						63	61			81			80
TDA	B25 W19 C8 V10	0	D						0	7		19		20		21	60	12		83			82
RDB	B25 W19 C8 V10	0	D						10	6				23		22	59	14		85			84
OCC	B25 W19 C8	15	C						-	6				27		26	57	8		78			77
ODA	B25 W19 C8	0	D		0				-	4				24		25	58	13					
R35ADA	B25 W19 C8 V10	0	D	0	10	0	0	0	0	6		18		17		16		15		87			86

TEST RUN NUMBERS

TEST RUN NUMBERS

1	7	13	19	25	31	37	43	49	55	61	67	75	86
CLM	KN	ICA	LY	CBL	CYN	CAB	CAE	CAC					

COEFFICIENTS:

A or B
SCHEDULES

$\alpha(A) = 5^\circ \text{ TO } 25^\circ$ $\beta(C) = -10^\circ \text{ TO } 10^\circ$
 $\alpha(B) = 20^\circ \text{ TO } 40^\circ$ $\beta(D) = -4^\circ \text{ TO } 10^\circ$

→ IDPVAR(1) IDPVAR(2) NDV

COLLATION SUMMARY

☒ **POSTTEST**

TEST RUN NUMBERS	TEST RUN DATES	TEST RUN TIMES	TEST RUN LOCATIONS	TEST RUN COMMENTS
1	10/10/1964	10:00	1000	1000
2	10/10/1964	10:00	1000	1000
3	10/10/1964	10:00	1000	1000
4	10/10/1964	10:00	1000	1000
5	10/10/1964	10:00	1000	1000
6	10/10/1964	10:00	1000	1000
7	10/10/1964	10:00	1000	1000
8	10/10/1964	10:00	1000	1000
9	10/10/1964	10:00	1000	1000
10	10/10/1964	10:00	1000	1000
11	10/10/1964	10:00	1000	1000
12	10/10/1964	10:00	1000	1000
13	10/10/1964	10:00	1000	1000
14	10/10/1964	10:00	1000	1000
15	10/10/1964	10:00	1000	1000
16	10/10/1964	10:00	1000	1000
17	10/10/1964	10:00	1000	1000
18	10/10/1964	10:00	1000	1000
19	10/10/1964	10:00	1000	1000
20	10/10/1964	10:00	1000	1000
21	10/10/1964	10:00	1000	1000
22	10/10/1964	10:00	1000	1000
23	10/10/1964	10:00	1000	1000
24	10/10/1964	10:00	1000	1000
25	10/10/1964	10:00	1000	1000
26	10/10/1964	10:00	1000	1000
27	10/10/1964	10:00	1000	1000
28	10/10/1964	10:00	1000	1000
29	10/10/1964	10:00	1000	1000
30	10/10/1964	10:00	1000	1000
31	10/10/1964	10:00	1000	1000
32	10/10/1964	10:00	1000	1000
33	10/10/1964	10:00	1000	1000
34	10/10/1964	10:00	1000	1000
35	10/10/1964	10:00	1000	1000
36	10/10/1964	10:00	1000	1000
37	10/10/1964	10:00	1000	1000
38	10/10/1964	10:00	1000	1000
39	10/10/1964	10:00	1000	1000
40	10/10/1964	10:00	1000	1000
41	10/10/1964	10:00	1000	1000
42	10/10/1964	10:00	1000	1000
43	10/10/1964	10:00	1000	1000
44	10/10/1964	10:00	1000	1000
45	10/10/1964	10:00	1000	1000
46	10/10/1964	10:00	1000	1000
47	10/10/1964	10:00	1000	1000
48	10/10/1964	10:00	1000	1000
49	10/10/1964	10:00	1000	1000
50	10/10/1964	10:00	1000	1000
51	10/10/1964	10:00	1000	1000
52	10/10/1964	10:00	1000	1000
53	10/10/1964	10:00	1000	1000
54	10/10/1964	10:00	1000	1000
55	10/10/1964	10:00	1000	1000
56	10/10/1964	10:00	1000	1000
57	10/10/1964	10:00	1000	1000
58	10/10/1964	10:00	1000	1000
59	10/10/1964	10:00	1000	1000
60	10/10/1964	10:00	1000	1000
61	10/10/1964	10:00	1000	1000
62	10/10/1964	10:00	1000	1000
63	10/10/1964	10:00	1000	1000
64	10/10/1964	10:00	1000	1000
65	10/10/1964	10:00	1000	1000

SCHEDULES

→ IDPVAR(1) | IDPVAR(2) | NDV

TEST FACILITY DESCRIPTION

The Marshall Space Flight Center 14" x 14" Trisonic Wind Tunnel is an intermittent blowdown tunnel which operates by high pressure air flowing from storage to either vacuum or atmospheric conditions. A Mach number range from .2 to 5.85 is covered by utilizing two interchangeable test sections. The transonic section permits testing at Mach 0.20 through 2.50, and the supersonic section permits testing at Mach 2.74 through 5.85. Mach numbers between .2 and .9 are obtained by using a controllable diffuser. The range from .95 to 1.3 is achieved through the use of plenum suction and perforated walls. Mach numbers of 1.44, 1.93 and 2.50 are produced by interchangeable sets of fixed contour nozzle blocks. Above Mach 2.50 a set of fixed contour nozzle blocks are tilted and translated automatically to produce any desired Mach number in .25 increments.

Air is supplied to a 6000 cubic foot storage tank at approximately -40°F dew point and 500 psi. The compressor is a three-stage reciprocating unit driven by a 1500 hp motor.

The tunnel flow is established and controlled with a servo actuated gate valve. The controlled air flows through the valve diffuser into the stilling chamber and heat exchanger where the air temperature can be controlled from ambient to approximately 180°F . The air then passes through the test section which contains the nozzle blocks and test region.

Downstream of the test section is a hydraulically controlled pitch sector that provides a total angle of attack range of 20° ($\pm 10^{\circ}$). Sting offsets are available for obtaining various maximum angles of attack up to 25° .

TEST FACILITY DESCRIPTION

(CONTINUED)

The diffuser section has movable floor and ceiling panels which are the primary means of controlling the subsonic Mach numbers and permit more efficient running supersonically. The sector assembly and supersonic diffuser telescope into the subsonic diffuser to allow easy access to the model and test section.

Tunnel flow is exhausted through an acoustically damped tower to atmosphere or into the vacuum field of 42,000 cubic feet. The vacuum tanks are evacuated by vacuum pumps driven by a total of 500 hp.

Data is recorded by a solid state digital data acquisition system. The digital data is transferred to punched cards during the run to be reduced later by a computer to proper coefficient form.

The tunnel components and performance are discussed in more detail in NASA TM X-53185, dated December 22, 1964, and NASA TM X-53113, dated August 20, 1964.

TEST CONDITIONS TEST TWT-493

MACH NUMBER	REYNOLDS NUMBER per foot	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
.60	6.4×10^5	5.59	100
.90	6.8	8.02	99
.96	6.8	8.26	99
1.00	6.7	8.41	100
1.04	6.6	8.49	101
1.20	6.6	8.96	101
1.50	6.5	9.56	103
2.00	6.9	10.07	102
2.74	4.9	5.99	103
3.00	4.2	4.88	100
4.45	5.2	3.57	103
5.00	5.5	3.07	101

BALANCE UTILIZED: TWT Model 200, 6-Component Balance

CAPACITY:

NF 175 (lbs)
SF 150 (lbs)
AF 100 (lbs)
PM 185 (in-lb)
YM 160 (in-lb)
RM 50 (in-lb)

ACCURACY:

COEFFICIENT TOLERANCE:

COMMENTS:

DM
DM

DM

DM
DM

DATA REDUCTION

The calculation of the aerodynamic coefficients were about the body and stability axis reference systems. Data reduction included static tare, base pressure, and balance cavity pressure corrections to the balance recorded data. The model dimensional data utilized in computing the aerodynamic coefficients are listed in TABLE 11 below:

TABLE 11

	Full Scale	Model Scale
Area (S_{ref}) wing theoretical area	8451 ft ²	14.904 in ²
Length (c) wing theoretical MAC	71.72 ft	3.012 in
Span (b) wing theoretical span	143.5 ft	6.018 in
Base Area A_b :		
With straight sting, $A_b =$		1.358 in ²
With blade support, $A_b =$		1.295 in ²
Balance Cavity Base Area (A_c):		
With straight sting, A_c		.801 in ²
With blade support, A_c		.864 in ²
Balance Cavity Planform Area		
With blade support A_{cp}		.32 in ²
Axial Transfer Distance from		
BMC to MRC X_1		-.215 in (MRC is fwd of BMC)
Moment Arm from MRC to Centroid		-2.631
of A_{cp} , X_2		(MRC is fwd of BMC)
Body Length (nose of model to T.E. of wing) (ℓ_{ref})		10.734 in

NOTE: (1) A_{cp} and $X_2 = 0$ when straight sting is used.

The base pressure taps are located as shown on Figure 6 and the blade pressure tap is shown on Figure 7

Those equations where base pressure, cavity or surface pressure effects were accounted for are listed below.

Body Axis

(1) Normal Force Coefficient, (C_N)

$$C_N = \left[F_{NG} + (P_c - P_{sl}) A_{cp} \right] \frac{1}{q_\infty S_{(ref)}}$$

(2) Axial Force Coefficient, C_{A_T} and C_{A_F}

$$C_{A_T} = \left[F_{AG} + (P_c - P_{b_A}) A_c \right] \frac{1}{q_\infty S_{(ref)}}$$

$$C_{A_F} = C_{A_T} - C_{A_B}$$

(3) Pitching Moment Coefficient, (C_m)

$$C_m = \frac{M_{PG}}{q_\infty \bar{c} S_{(ref)}} + C_N \frac{X_1}{\bar{c}} - \frac{(P_c - P_{sl}) A_{cp} X_2}{q_\infty S_{(ref)} \bar{c}}$$

SUMMARY DATA PLOT INDEX

PLOT TITLE	PLOTTED COEFFICIENTS SCHEDULE	CONDITIONS VARYING	NOMINAL MACH NUMBER	NOMINAL α SCHEDULE (DEGREES)	NOMINAL β SCHEDULE (DEGREES)	PAGES
Elevon Effectiveness on the B-9U Configuration	A	Elevon Deflection Angle	.60-1.45	5 - 24	0	1-42
Elevon Effectiveness on the B-9U Configuration	A	Elevon Deflection Angle	2.0	5 - 25	0	43-48
Elevon Effectiveness on the B-9U Configuration	A	Elevon Deflection Angle	2.74	5 - 26	0	49-54
Elevon Effectiveness on the B-9U Configuration	A	Elevon Deflection Angle	2.99	5 - 37	0	55-60
Elevon Effectiveness on the B-9U Configuration	A	Elevon Deflection Angle	4.45	20 - 33	0	61-66
Elevon Effectiveness on the B-9U Configuration	B	Elevon Deflection Angle	.6-1.45	5 - 24	0	67-73
Elevon Effectiveness on the B-9U Configuration	B	Elevon Deflection Angle	1.99	5 - 25	0	74
Elevon Effectiveness on the B-9U Configuration	B	Elevon Deflection Angle	2.74	5 - 26	0	75
Elevon Effectiveness on the B-9U Configuration	B	Elevon Deflection Angle	2.99	5 - 37	0	76
Elevon Effectiveness on the B-9U Configuration	B	Elevon Deflection Angle	4.45	20 - 33	0	77
Effect of Mach Number on the B-9U Configuration (Canard Deflection = 0)	A	Mach Number	.60-4.45	5 - 25	0	78-89

SUMMARY DATA PLOT INDEX
(Continued)

PLOT TITLE	PLOTTED COEFFICIENT SCHEDULE	CONDITIONS VARYING	NOMINAL MACH NUMBER	NOMINAL α SCHEDULE (DEGREES)	NOMINAL β SCHEDULE (DEGREES)	PAGES
Effect of Mach Number on the B-9U Configuration (Canard Deflection = 0)	B	Mach Number	.60-4.45	5 - 25	0	90-91
Effect of Mach Number on the B-9U Configuration (Canard Deflection = -15)	A	Mach Number	.9-4.45	5 - 25 <hr/> 20-37	0	92-97
Effect of Mach Number on the B-9U Configuration (Canard Deflection = -15)	B	Mach Number	.9-4.45	5 - 25 <hr/> 20-37	0	98
Effect of Mach Number on the B-9U Configuration (Canard Deflection = -30)	A	Mach Number	.9-4.96	5 - 37	0	99-104
Effect of Mach Number on the B-9U Configuration (Canard Deflection = -30)	B	Mach Number	.9-4.96	5 - 37	0	105
Canard Effectiveness on the B-9U Configuration	A	Canard Deflection Angle	.9-1.95	5 - 24	0	106-135
Canard Effectiveness on the B-9U Configuration	A	Canard Deflection Angle	2.99	5 - 37	0	136-141
Canard Effectiveness on the B-9U Configuration	A	Canard Deflection Angle	4.45	20 - 33	0	142-147
Canard Effectiveness on the B-9U Configuration	B	Canard Deflection Angle	.9-1.95	5 - 24	0	148-152
Canard Effectiveness on the B-9U Configuration	B	Canard Deflection Angle	2.99	5 - 37	0	153

SUMMARY DATA PLOT INDEX
(Continued)

PLOT TITLE	PLOTTED COEFFICIENTS SCHEDULE	CONDITIONS VARYING	NOMINAL MACH NUMBER	NOMINAL α SCHEDULE (DEGREES)	NOMINAL β SCHEDULE (DEGREES)	PAGES
Canard Effectiveness on the B-9U Configuration	B	Canard Deflection	4.45	20 - 33	0	154
Lateral-Directional Data With Varying Alpha for the Complete B-9U Configuration	C	Angle of Attack	1.0-5.0	0,6,15	-11 - 11	155-172
Lateral-Directional Data With Varying Alpha for the B-9U Configuration With Tail Off	C	Angle of Attack	1.0-5.0	0,15,25,30	-12 - 12	173-190
Lateral-Directional Data With Varying Mach No. For the Complete B-9U Configuration	C	Mach Number	1.0-5.0	0,6,15	-3 - 17	191-211
Lateral-Directional Tail and Rudder Effectiveness for B-9U Configuration (Alpha = 0)	C	Rudder and Tail Deflection Angle	1.0-5.0	0	-2 - 11	212-229
Lateral-Directional Rudder Data With Varying Mach No. for B-9U Configuration	C	Mach Number	1.0-5.0	0	-4 - 16	230-232
Lateral-Directional Data Tail on and off for B-9U Configuration (Alpha = 15)	C	Configuration	1.0-5.0	15	-11 - 11	233-250
Lateral-Directional Aileron Data for B-9U Configuration (Alpha = 0)	C	Aileron Deflection Angle	.9-5.0	0	-2 - 11	251-268
Lateral-Directional Aileron Data for B-9U Configuration (Alpha = 15)	C	Aileron Deflection Angle	1.2-1.96	15	-11 - 11	269-274

SUMMARY DATA PLOT INDEX
(Continued)

PLOT TITLE	PLOTTED COEFFICIENTS SCHEDULE	CONDITIONS VARYING	NOMINAL MACH NUMBER	NOMINAL α SCHEDULE (DEGREES)	NOMINAL β SCHEDULE (DEGREES)	PAGES
Lateral-Directional Small Body Flap Effectiveness for B-9U Configuration (Alpha = 30)	C	Small Body Flap Deflection Angle	1.97-5.0	30	-12 - 12	275-283
Lateral-Directional Small Body Flap Effectiveness for B-9U Configuration (Alpha = 15)	C	Small Body Flap Deflection Angle	1.19-3.0	15	-11 - 11	284-292
Lateral-Directional Large Body Flap Effectiveness for B-9U Configuration (Alpha = 30)	C	Large Body Flap Deflection Angle	3.0-5.0	30	-11 - 11	293-298
Lateral-Directional Large Body Flap Effectiveness for B-9U Configuration (Alpha = 15)	C	Large Body Flap Deflection Angle	1.0-1.96	15	-11 - 11	299-307
Lateral-Directional Data Small and Large Body Flaps for B-9U Configuration (Alpha = 15)	C	Small & Large Body Flap Deflection Angle	1.0-1.96	15	-11 - 11	308-316
Lateral-Directional Data Small and Large Body Flaps for B-9U Configuration (Alpha = 30)	C	Small & Large Body Flap Deflection Angle	1.95-5.0	30	-12 - 12	317-328
Lateral-Directional Incremental Coefficients Due to Control Deflections	D	Angle of Attack	.9-3.0	5 - 23	0	329-403
Lateral-Directional Incremental Coefficients Due to Control Deflections	E	Angle of Attack	.9-2.0	5 - 23	0	404-448

SUMMARY DATA PLOT INDEX
(Continued)

PLOT TITLE	PLOTTED COEFFICIENTS SCHEDULE	CONDITIONS VARYING	NOMINAL MACH NUMBER	NOMINAL α SCHEDULE (DEGREES)	NOMINAL β SCHEDULE (DEGREES)	PAGES
Lateral-Directional Longitudinal Partial Derivatives	F	Angle of Attack	.9-3.0	5 - 23	0	449-463
Lateral-Directional Longitudinal Partial Derivatives	G	Angle of Attack	.9-2.0	5 - 23	0	464-472

PLOTTED COEFFICIENTS SCHEDULE:

SCHEDULE A

CN vs. α
CL vs. α
CA vs. α
CAF vs. α
CIM vs. α
L/D vs. α

SCHEDULE B

CN vs. CIM

SCHEDULE C

CY vs. β
CYN vs. β
CBL vs. β

SCHEDULE D

DLTCN vs. DLTEL
DCTCIM vs. DLTEL
DLTCA vs. DLTEL

SCHEDULE E

DLTCN vs. DLTCND
CLTCIM vs. DLTCND
DLTCA vs. DLTCND

SCHEDULE F

DCN/DE vs. α
DCLMDE vs. α
DCA/DE vs. α

SCHEDULE G

DCN/DC vs. α
DCLMDC vs. α
DCA/DC vs. α

FIGURES

Notes:

1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrows.
2. For clarity, origins of wind and stability axes have been displaced from the center of gravity.

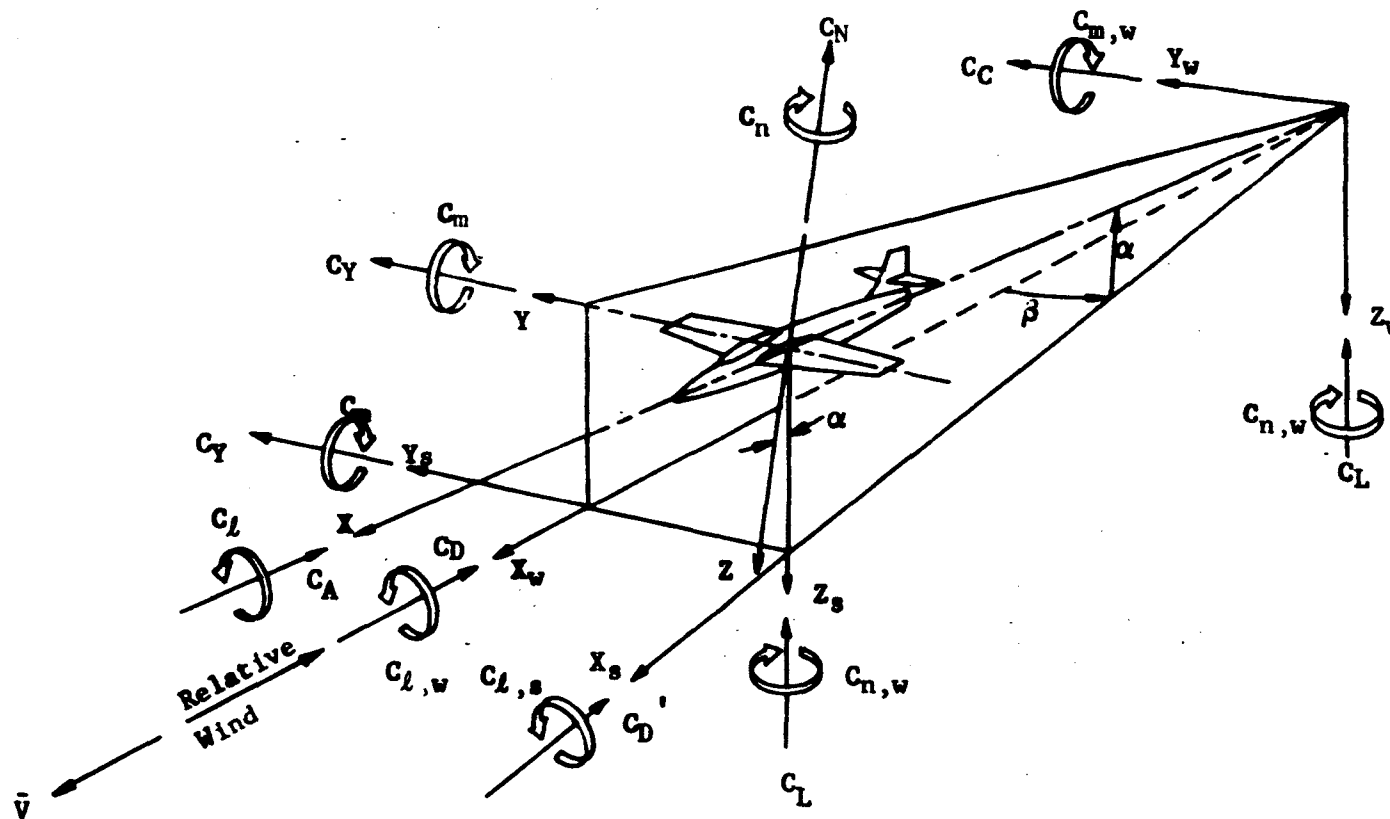


Figure 1. Axis systems, showing direction and sense of force and moment coefficients, angle of attack, and sideslip angle

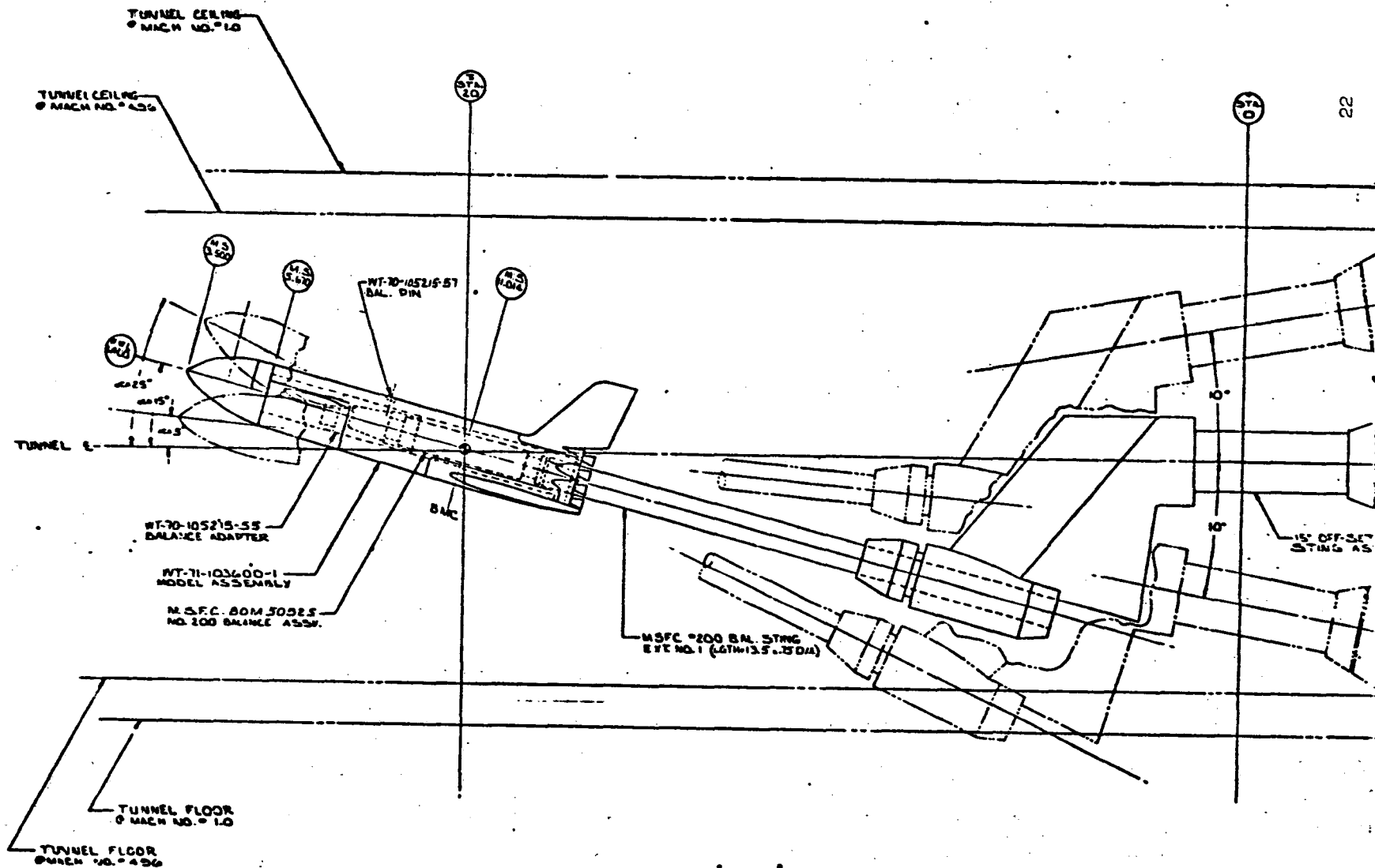
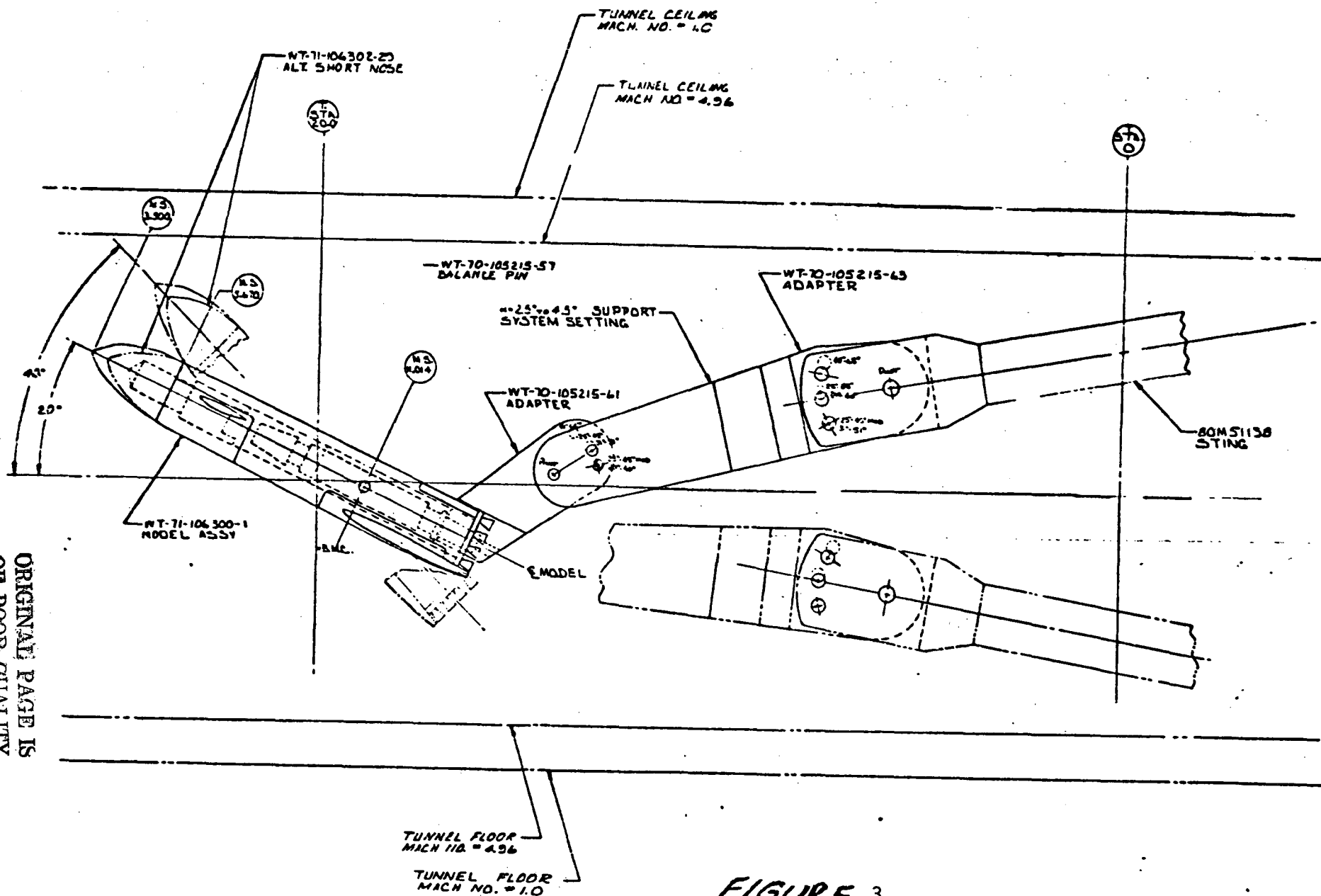


Figure 2. $\alpha = 3.25^\circ$ TUNNEL INSTALLATION

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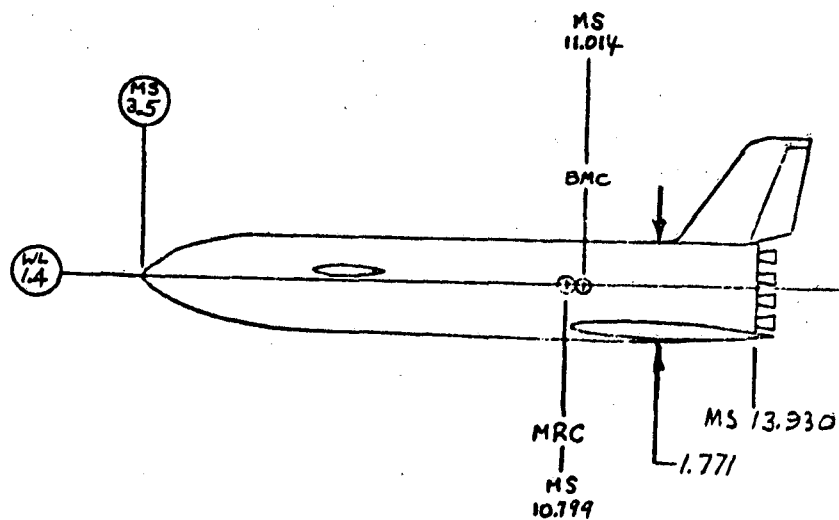
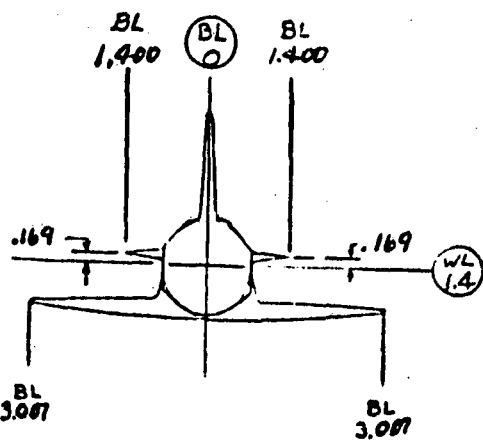
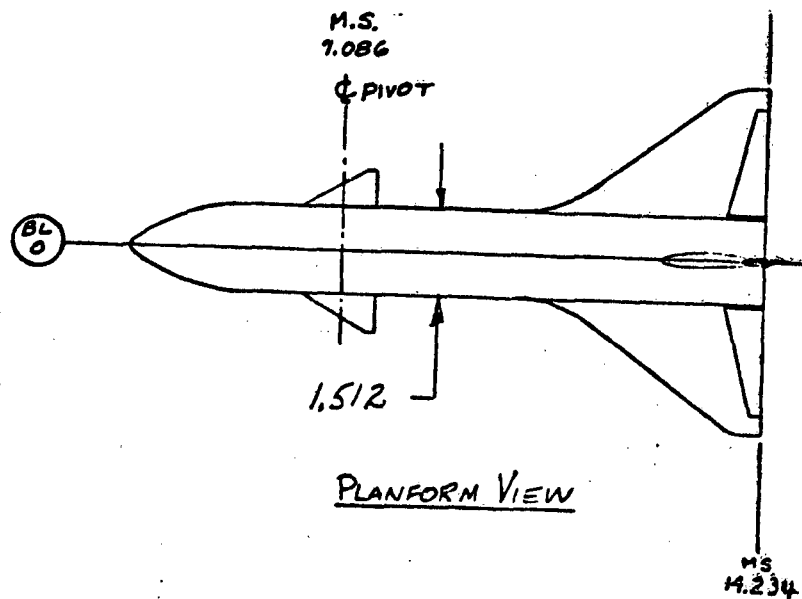


Figure 4. Model Three-View

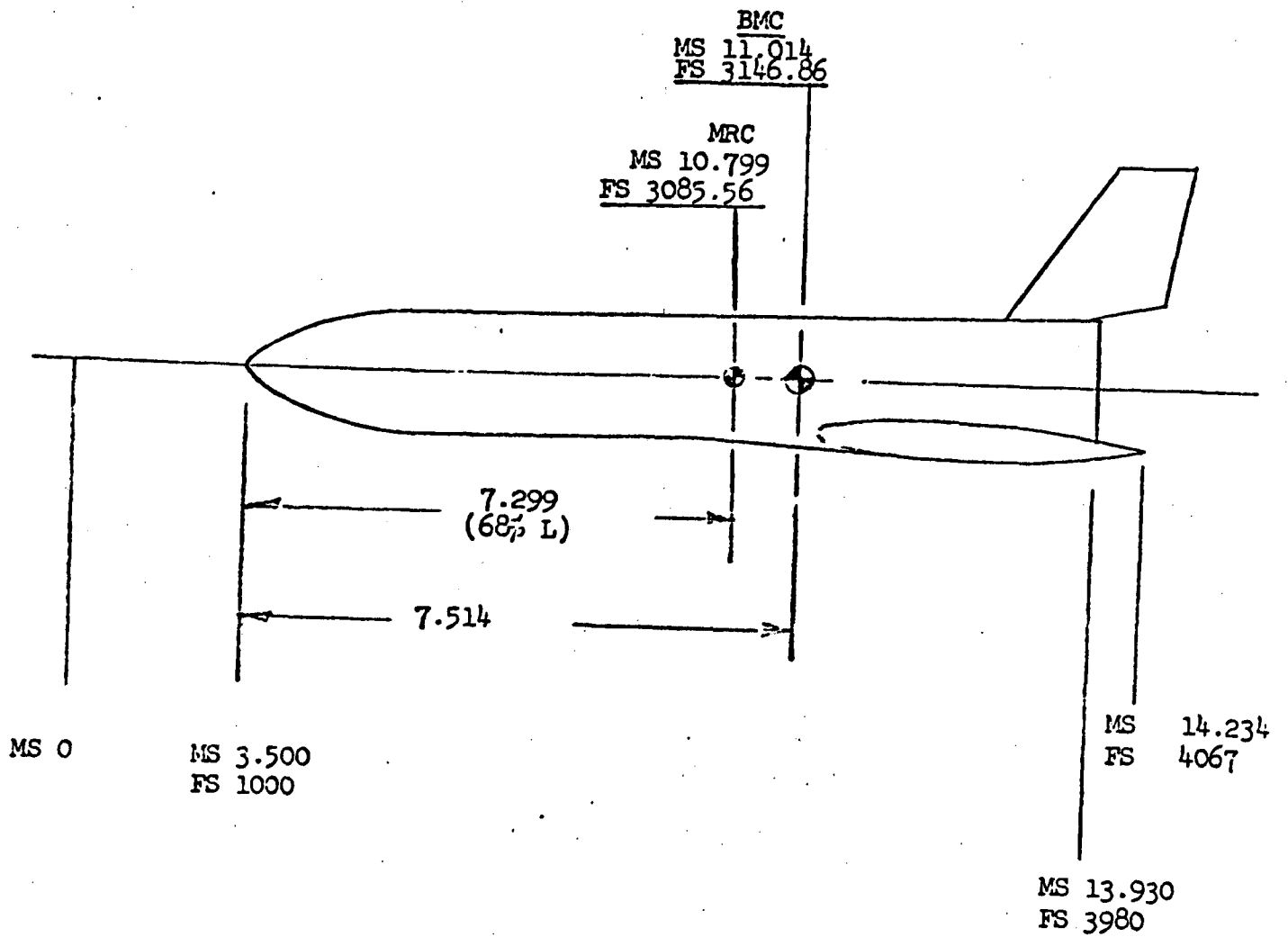
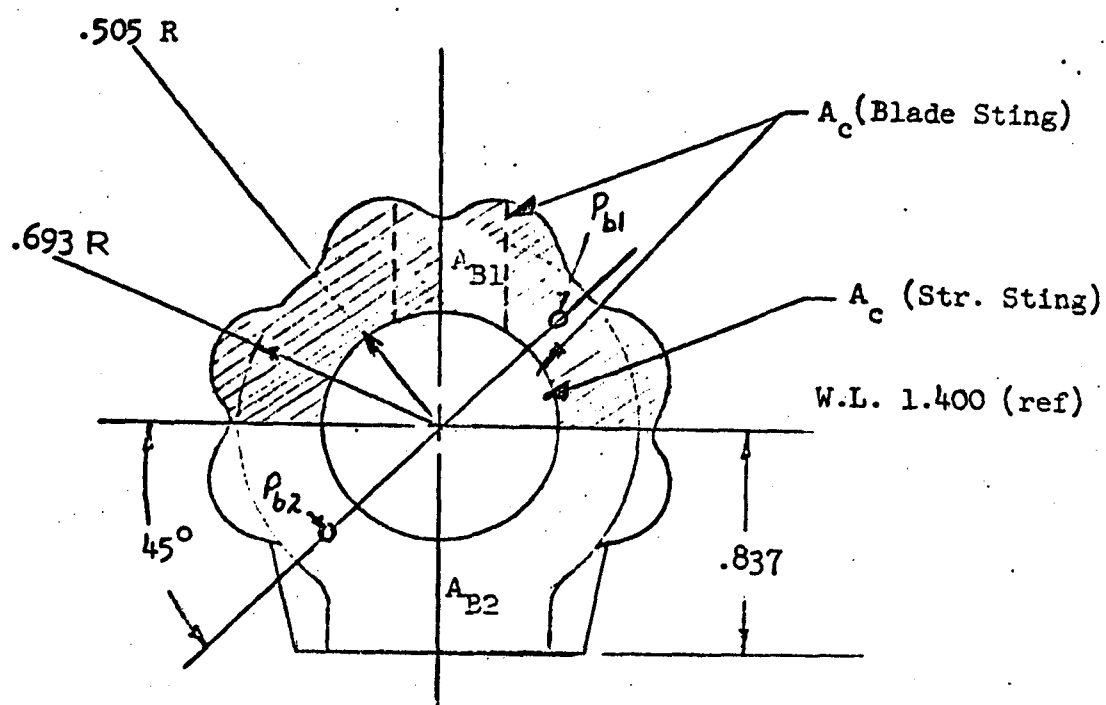


Figure 5. Moment Transfer Diagram

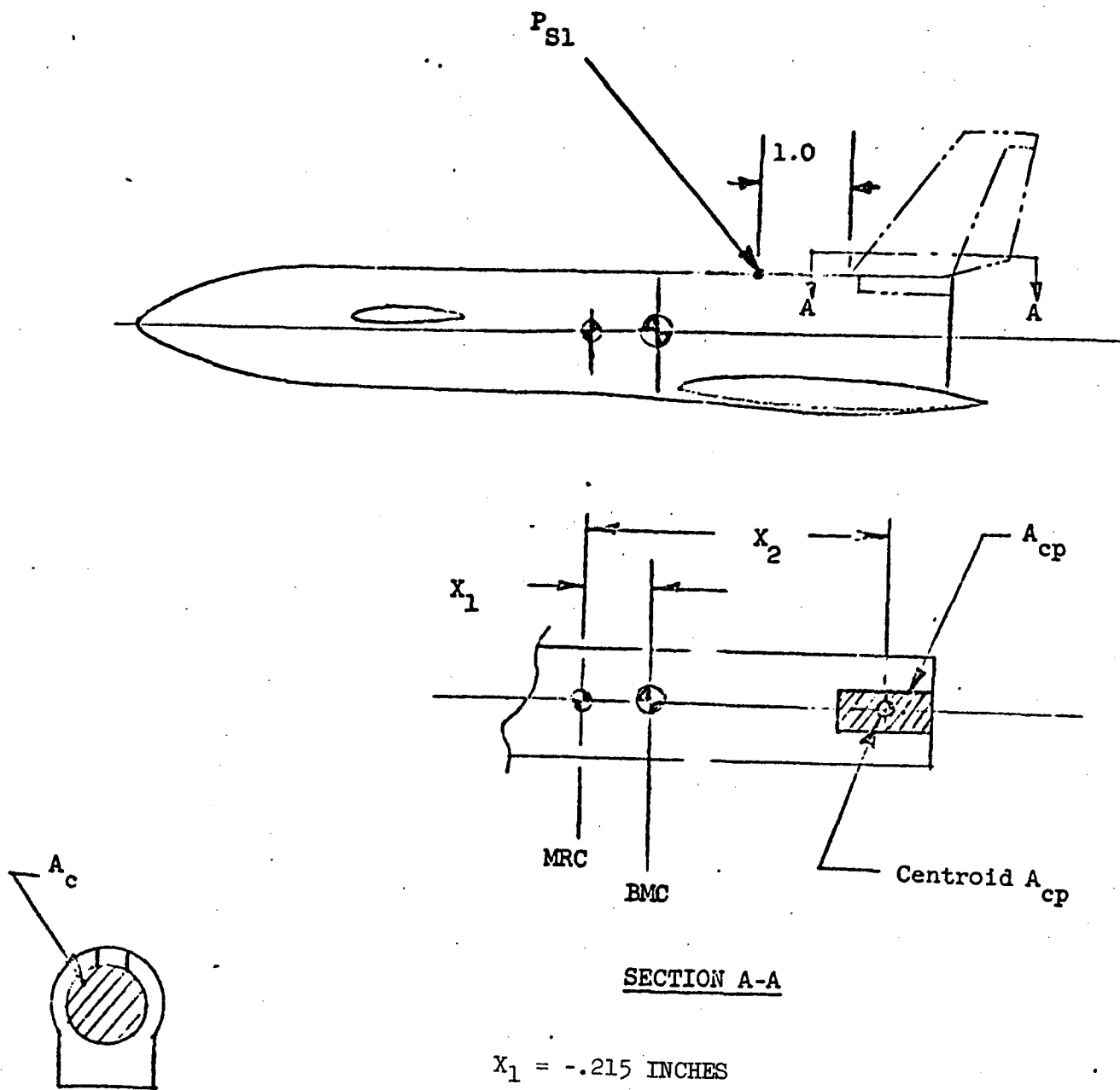
STING CONFIG.	AREA (SQ. IN.)			TOTAL AREA	
	A_{B1}	A_{B2}	A_C		
STRAIGHT STING	.454	.904	.801	2.159	
BLADE STING	.391	.904	.864	2.159	



View Looking Forward

Figure 6. Base Pressure Tap Locations

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NOTE: A_c has different value for conventional straight sting

$$X_1 = -.215 \text{ INCHES}$$

$$X_2 = -2.631 \text{ INCHES}$$

Figure 7. Location of Blade Pressure Tap and Moment Arms and Vertical Tail Cavity.

MEASURED DIMENSIONS

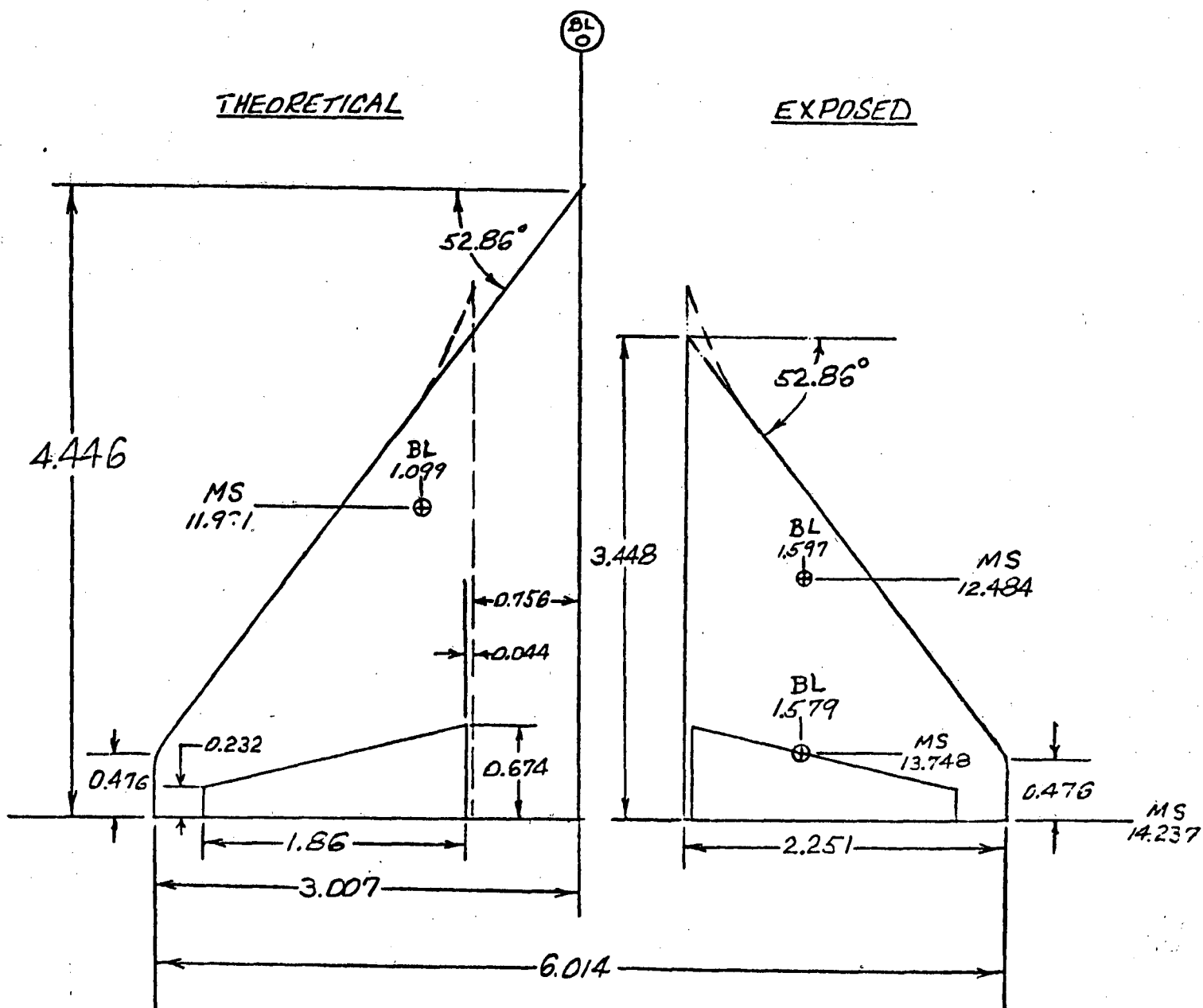


Figure 8. Wing - W₁₉

MEASURED DIMENSIONS

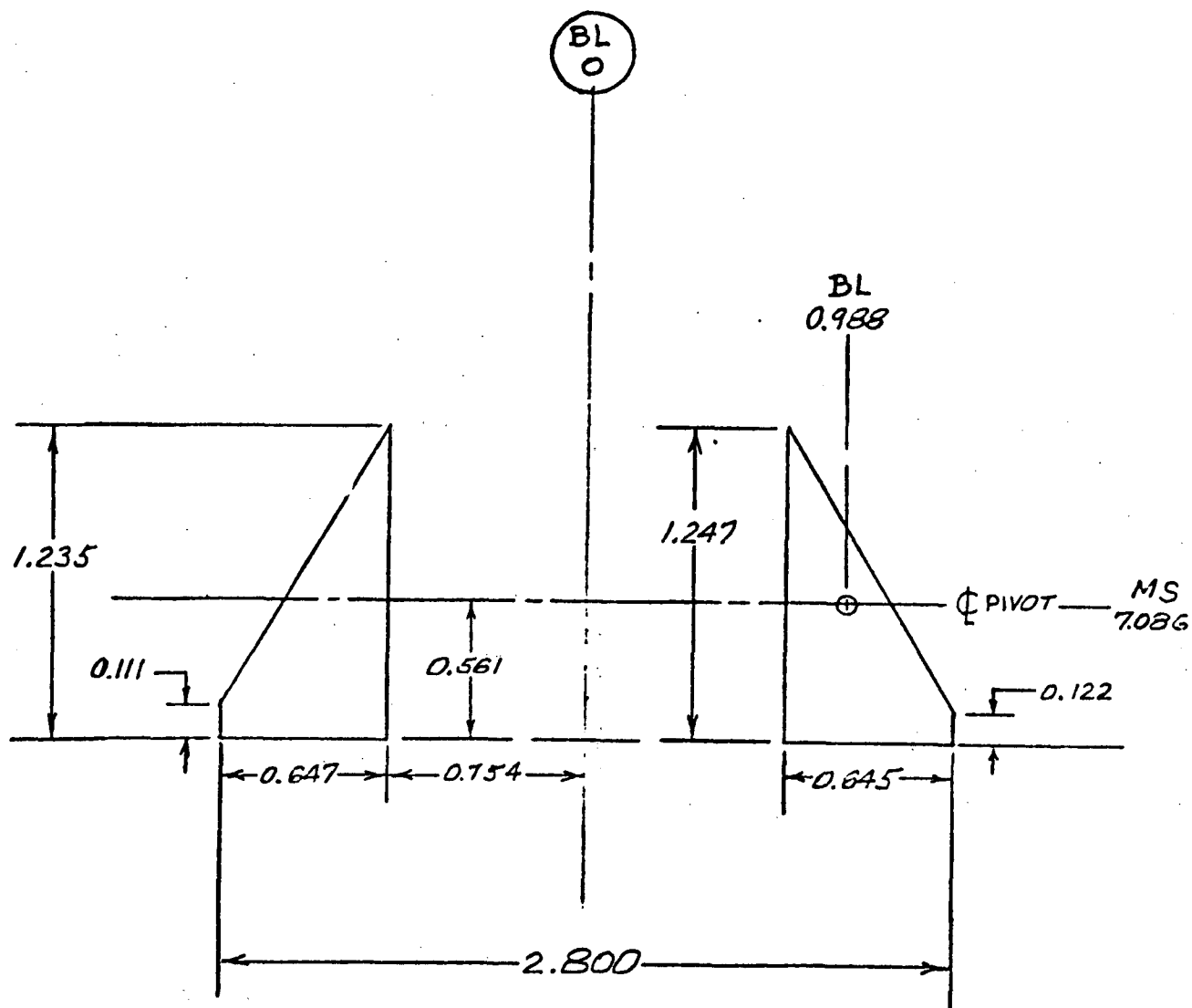


Figure 9. Canard - C₈

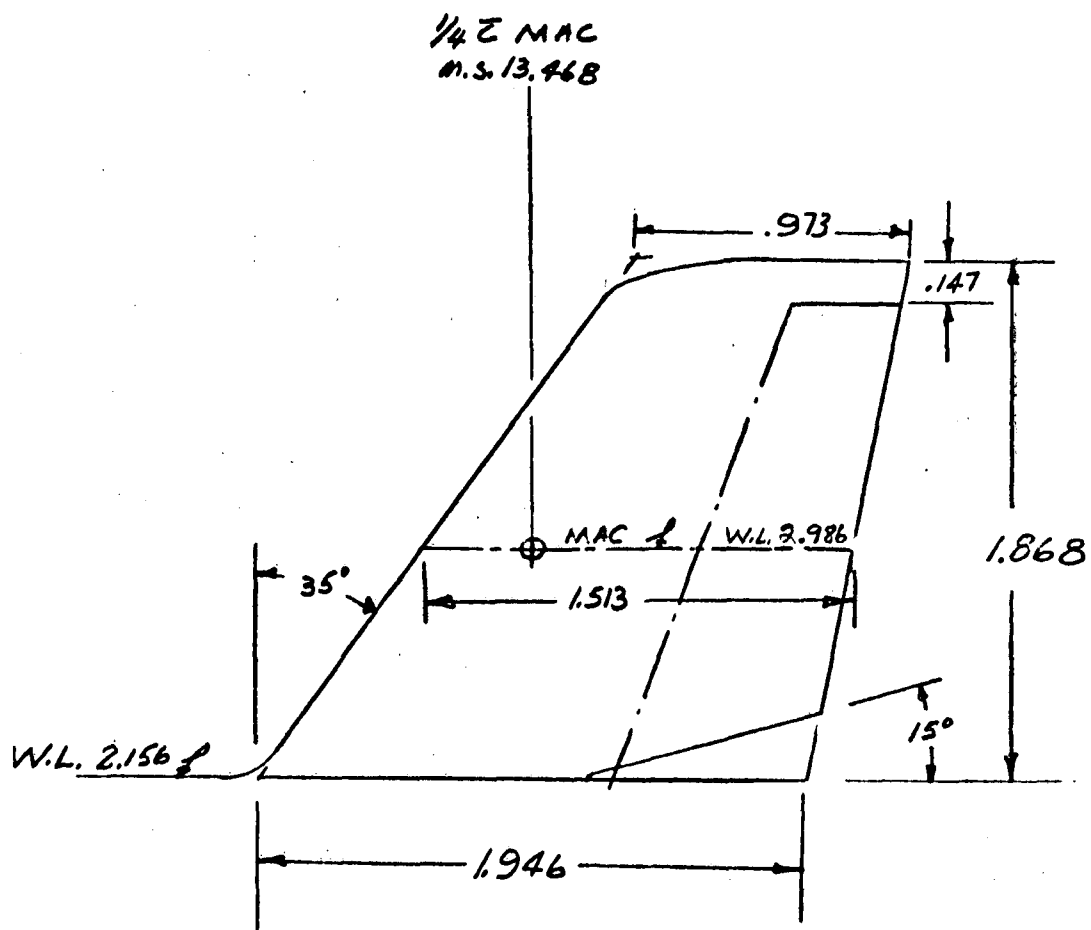


Figure 10. Vertical Tail - V₁₀

FLAP PIVOTS DOWN FROM
WING LOWER SURFACE

	A	B
F_7	.471	.561
F_8	.667	.795

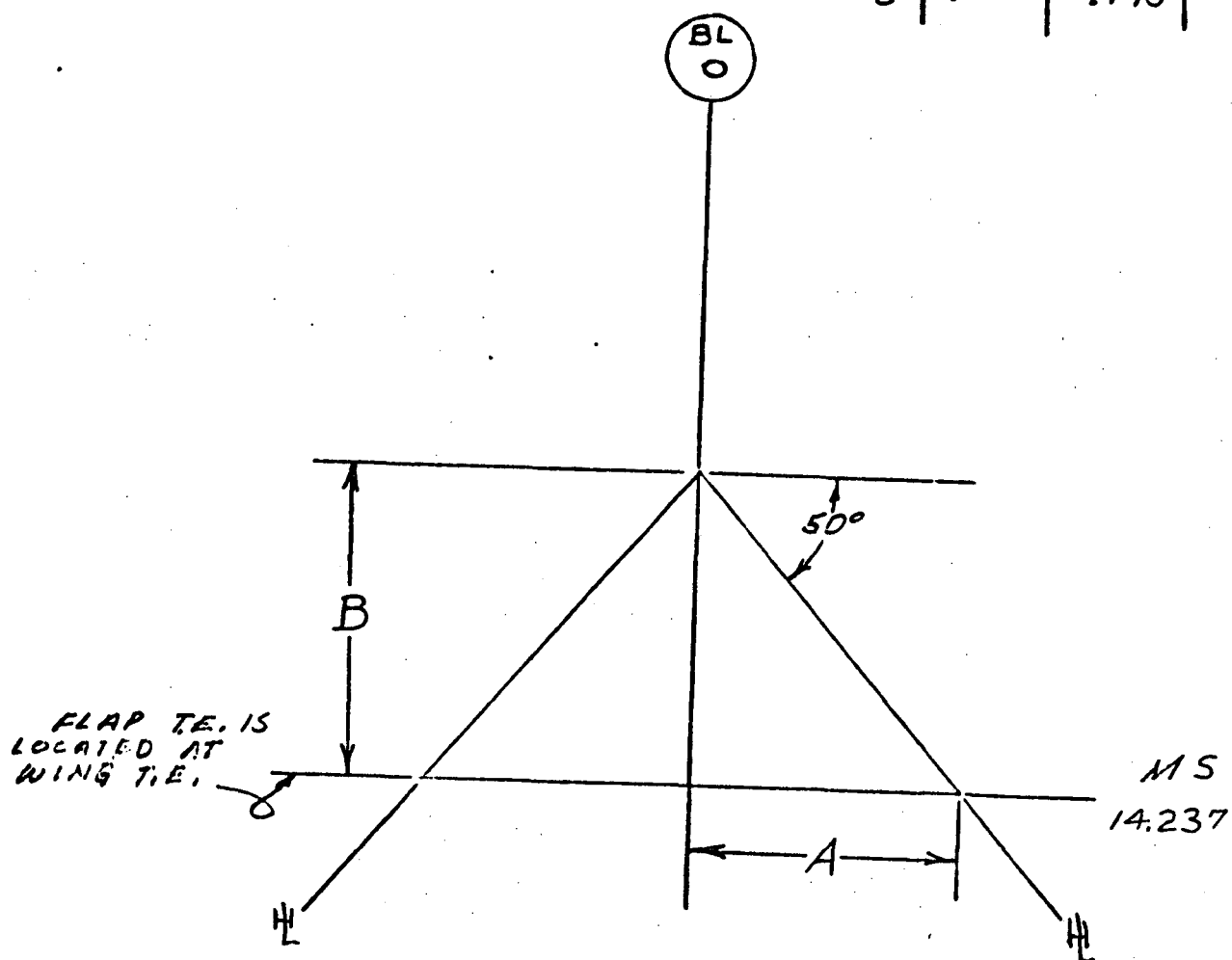


Figure 11. Body Flap - F_7 , F_8

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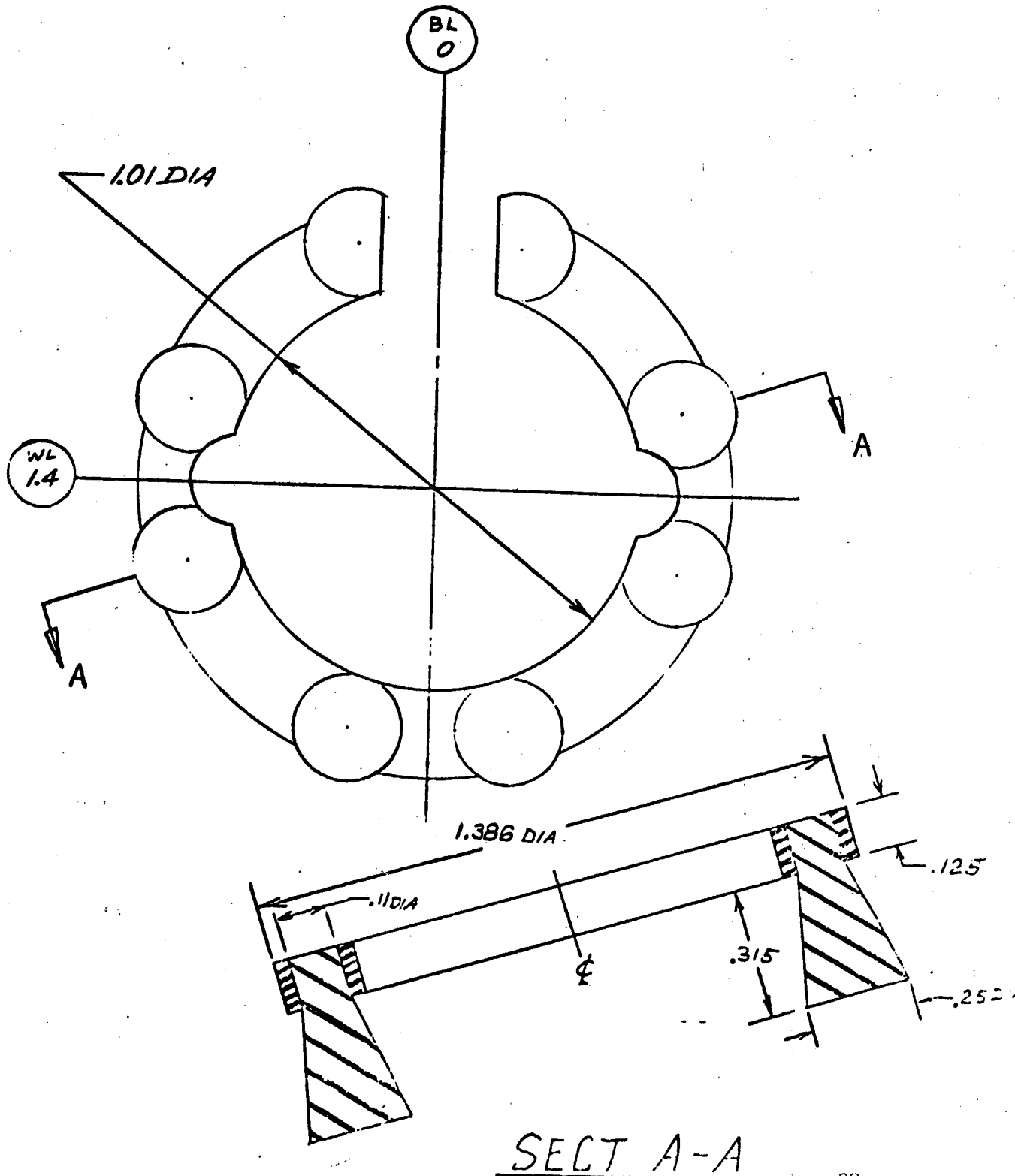
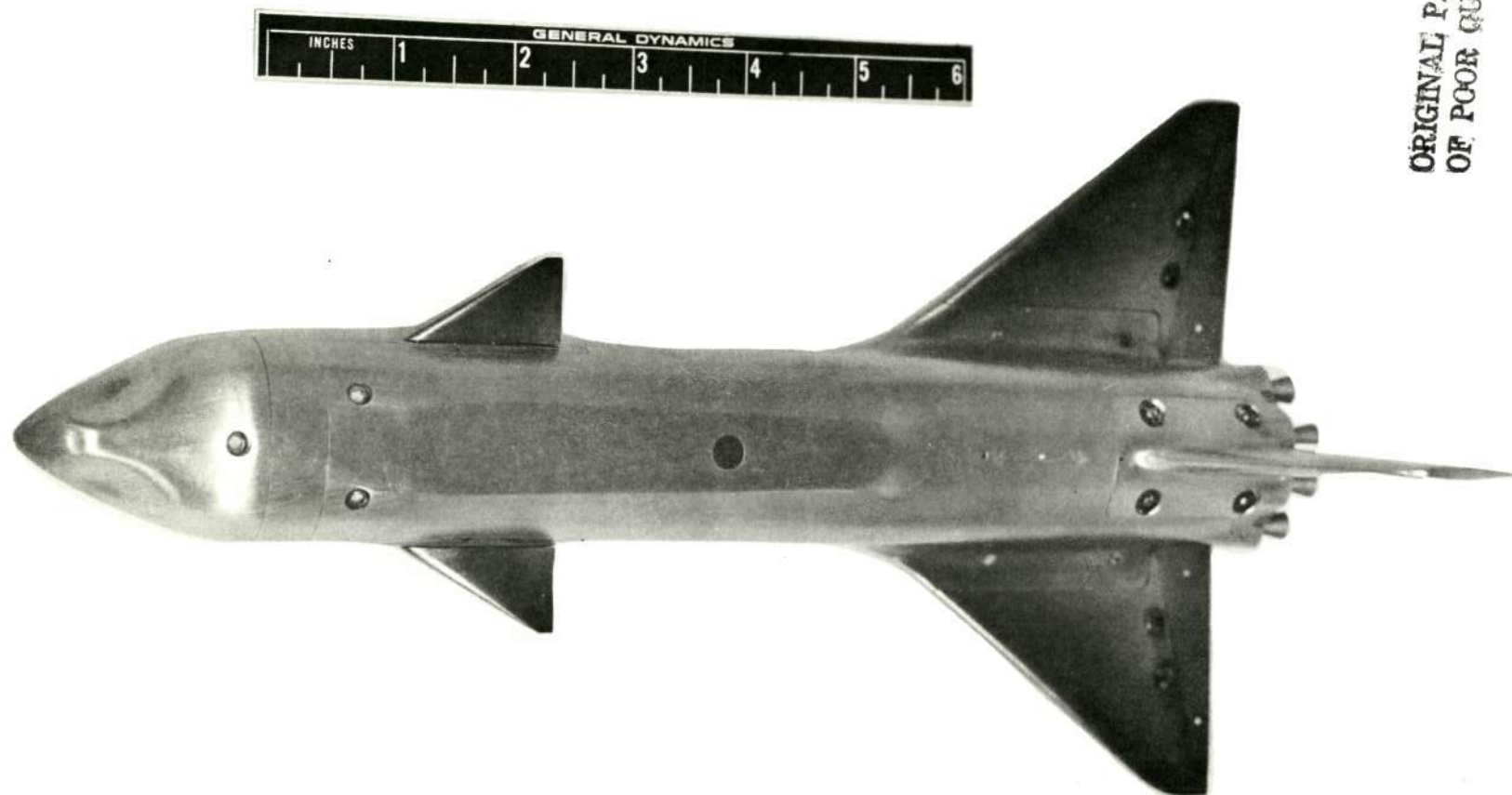


Figure 12. Rocket Engines - R₄



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Figure 13. Planview of .0035 Scale Model



34

Figure 14. Sideview of .0035 Scale Model

493 104

Figure 15. Schlieren Photo of Model at Mach = 3.00 With Blade Support (Run 104)

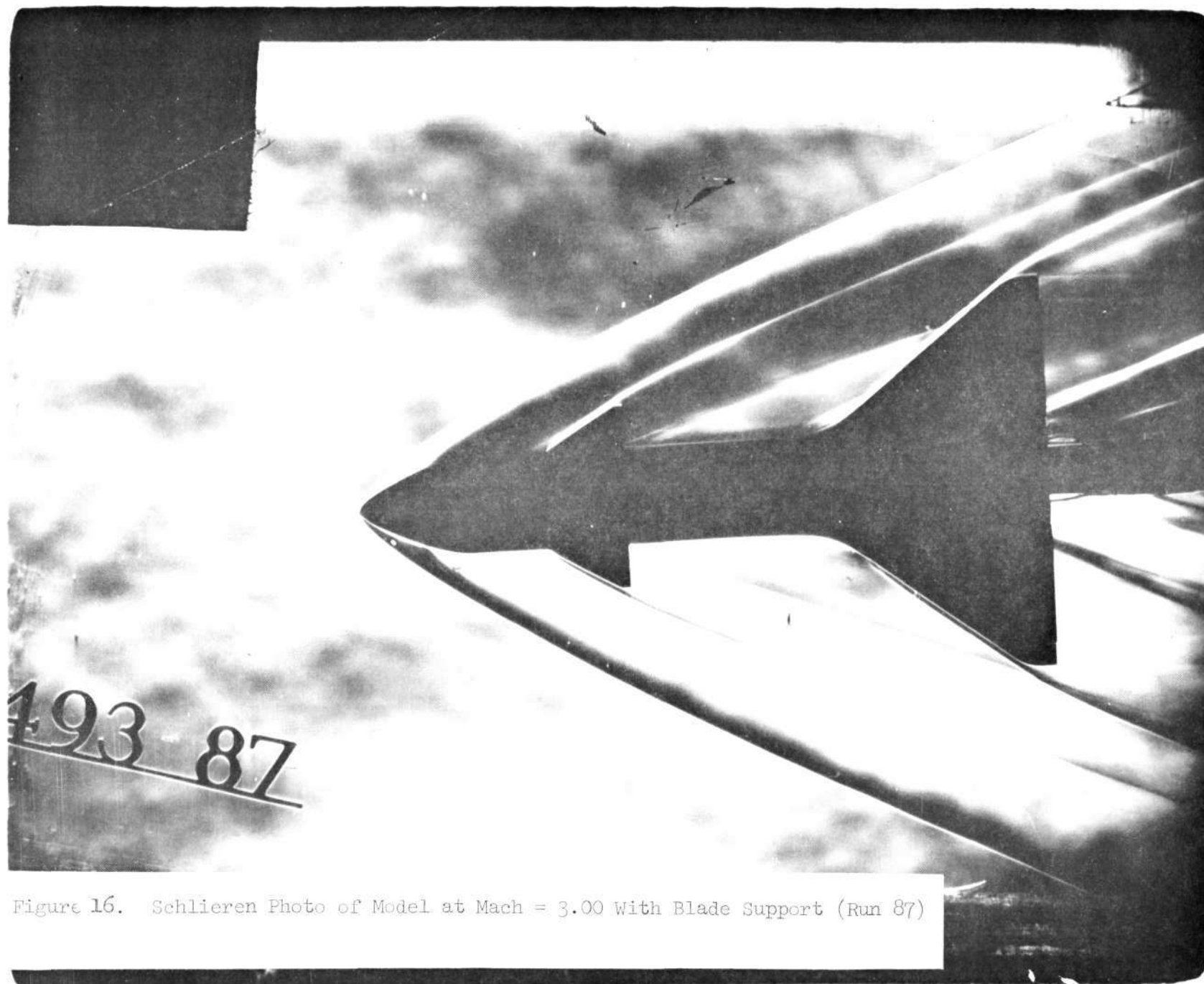


Figure 16. Schlieren Photo of Model at Mach = 3.00 With Blade Support (Run 87)

MODEL COMPONENT DESCRIPTION SHEETS

MODEL COMPONENT: BODY - B₂₅

GENERAL DESCRIPTION: B-9U, symmetrical about butto line 0.0 the body varies from a round cross section near the nose to a flat bottom cross section for the center and aft end, providing a natural fairing for the delta wing.
(same as B₂₂ with R₄ rocket engines).

DRAWING NUMBER:

WT-71-106302

DIMENSIONS:

		<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length		<u>248.3 ft</u>	<u>10.430 in</u>
Max. Width	At wing intersect.	<u>40 ft</u>	<u>1.680 in</u>
	At tank C _L	<u>36 ft.</u>	<u>1.512 in</u>
Max. Depth	@Sta. 3500 FB	<u>41 ft</u>	<u>1.722 in</u>
	to lower surf. of wing		
Fineness Ratio		<u>6.23</u>	<u>6.23</u>
Area			
Max. Cross-Sectional		<u>1319 sq.ft</u>	<u>2.326 in²</u>
Planform (to wing junction)		<u>8728 sq.ft</u>	<u>15.395 in²</u>
	Incl. center sect. to		
Wetted	wing junction, less base	<u>29,664 sq.ft</u>	<u>52.327 in²</u>
Base		<u>1062 sq.ft.</u>	<u>1.874 in²</u>

MODEL COMPONENT: Wing - W₁₉

GENERAL DESCRIPTION: Delta wing with 53° L.E. sweepback and an unswept T.E.
with a wing-body fillet and with diff. airfoils at theo. root, body junction,
break and tip.

DRAWING NUMBER: WT-71-106303

DIMENSIONS:

FULL-SCALE

MODEL SCALE

TOTAL DATA

Area		
Planform	8451.0 ft ²	14.904 in ²
Wetted		
Span (equivalent)	143.5 ft	6.018 in
Aspect Ratio	2.444	2.444
Rate of Taper		
Taper Ratio	.107	.107
Diehedral Angle, degrees	3°	3°
Incidence Angle, degrees	2°	2°
Aerodynamic Twist, degrees		
Toe-In Angle		
Cant Angle		
Sweep Back Angles, degrees		
Leading Edge	52.86°	52.86°
Trailing Edge	0°	0°
0.25 Element Line		
Chords:		
Root (Wing Sta. 0.0)	1270 in	4.446
Tip, (equivalent)	136 in	.476
MAC	860.64 in	3.012
Fus. Sta. of .25 MAC	Sta. 3425	Sta. 11.991
W.P. of .25 MAC		.761
B.L. of .25 MAC		1.099
Airfoil Section		
Root (BL 216 in f.s.)	NACA 0007.1-64	
Tip	NACA 0010-64 (MOD L.E)	
Body junction	NACA 0008.46-64	
Break	NACA 0010.3-64	

EXPOSED DATA

Area		
Span, (equivalent)	107.19 ft	4.502 in
Aspect Ratio	2.295	2.295
Taper Ratio	.138	.138
Chords		
Root	985.1 in	3.448 in
Tip	130.0 in	.476 in
MAC	667.7 in	2.337 in
Fus. Sta. of .25 MAC		12.484
W.P. of .25 MAC		0.770
B.L. of .25 MAC		1.597

MODEL COMPONENT: Canard C₈

GENERAL DESCRIPTION: Delta canard with 60° L.E. sweep and a full scale
exposed area of 504 ft²

DRAWING NUMBER: WT-71-106302

DIMENSIONS - EXPOSED:

	FULL SCALE	MODEL SCALE
Area (Two panels)	504 ft ²	0.888 in ²
Span (equivalent)	14.03 ft	0.645 in
Aspect Ratio	1.87	1.87
Taper Ratio	0.106	0.106
Dihedral Angle	0	0
Incidence Angle	Variable	Variable
Sweep Back Angles		
Leading Edge	60.12	60.12
Trailing Edge	0	0
0.25 Chord Line		
Chords		
Root	28.03 ft	1.247 in
Tip	3.13 ft	0.132 in
MAC	19.98	0.840 in
Airfoil Section		
Root	NACA 0014-6.6,5	
Tip	NACA 0014-6.6,5	
Fuse. Sta. of .25 MAC	Sta 2000	Sta 7.007
W.L. of .25 MAC		1.569
B.L. of .25 MAC	23.60 ft	
Pivot Location		
Percent root chord	54.8%	54.8%
Fuselage station		
Water line		

MODEL COMPONENT: Vertical Tail V10

GENERAL DESCRIPTION: Vertical tail with 35° LE sweep a taper ratio of 0.5
and a full scale area of 1500 ft².

DRAWING NUMBER: WT-71-106303

DIMENSIONS - EXPOSED:

	FULL SCALE	MODEL SCALE
Area	1500 ft ²	
Span (equivalent)	44.48 ft	1.868 in
Aspect Ratio	1.28	1.28
Taper Ratio	0.50	0.50
Dihedral Angle		
Incidence Angle		
Sweep Back Angles		
Leading Edge	35°	25°
Trailing Edge	10°50'	10°50'
0.25 Chord Line		
Chords		
Root	46.34 ft	1.946 in
Tip	23.17 ft	.973 in
MAC	36.03 ft	
Airfoil Section		
Root	NACA 0013-64	
Tip	NACA 0011-64	
Fuse. Sta. of .25 MAC	3848	
W.L. of .25 MAC	W.L. 853.24	
B.L. of .25 MAC	0	0
Pivot Location		
Percent root chord		
Fuselage station		
Water line		

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MODEL COMPONENT: Body Flap F₇

GENERAL DESCRIPTION: Delta planform body flap with T.E. at wing T.E.,
hinge line swept back 50°. Full scale undeflected area = 75 ft²
Only left hand flap (looking fwd) was used during this test period.

DRAWING NUMBER:

WT-71-106302

DIMENSIONS: (PER SIDE)

	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>75 ft²</u>	<u>.132 in²</u>
Span (equivalent)	<u>11.2 ft</u>	<u>.471 in</u>
Aspect Ratio	<u>1.68</u>	<u>1.68</u>
Taper Ratio	<u>0</u>	<u>0</u>
Chords		
Root	<u>13.4 ft</u>	<u>.561 in</u>
Tip	<u>0</u>	<u>0</u>
Sweep Back Angles, degrees		
Leading Edge	<u>50</u>	<u>50</u>
Tailing Edge	<u>0</u>	<u>0</u>
Hingeline	<u>50</u>	<u>50</u>
Fuse. Sta. of T.E.	<u>4067</u>	<u>14.234</u>
Butt Line of Root Chord	<u>0</u>	<u>0</u>

MODEL COMPONENT: Body Flap F₈

GENERAL DESCRIPTION: Delta planform body flap with trailing edge at wing
trailing edge, hinge line sweptback 50°, full scale deflected area = 150 ft²
Only left hand (looking fwd) body flap used during this test.

DRAWING NUMBER:

WT-71-106302

DIMENSIONS: /PER SIDE

	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>150 ft²</u>	<u>.265 in²</u>
Span (equivalent)	<u>15.9 ft</u>	<u>.667 in</u>
Aspect Ratio	<u>1.68</u>	<u>1.68</u>
Taper Ratio	<u>0</u>	<u>0</u>
Chords		
Root	<u>18.9 ft</u>	<u>.725 in</u>
Tip	<u>0</u>	<u>0</u>
Sweep Back Angles, degrees		
Leading Edge	<u>50</u>	<u>50</u>
Trailing Edge	<u>0</u>	<u>0</u>
Hingeline	<u>50</u>	<u>50</u>
Fuse. Sta. of Trailing Edge	<u>4067</u>	<u>14.234</u>
Butt Line of Root Chord	<u>0</u>	<u>0</u>

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MODEL COMPONENT: Body - Rocket Engines R₄

GENERAL DESCRIPTION: Rocket engines for B-9U booster, outside (8) engines
only with part of top (2) engines removed for α blade. (See B₂₅)

DRAWING NUMBER: WT-71-106302

DIMENSIONS:

	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length	<u>7.5 ft</u>	<u>.315 in</u>
Max. Width	<u>6.0 ft</u>	<u>.25 in</u>
Max. Depth	<u>6.0 ft</u>	<u>.25 in</u>
Fineness Ratio l/d	<u>1.25</u>	<u>1.25</u>
Area		
Max. Cross-Sectional	<u>28.28 ft²</u>	<u>.049 in²</u>
Planform	<u>35.8 ft²</u>	<u>.058 in²</u>
Wetted	<u>112.1 ft²</u>	<u>.187 in²</u>
Base	<u>28.28 ft²</u>	<u>.049 in²</u>

NOMENCLATURE

(General)

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
α	ALPHA	angle of attack, angle between the projection of the wind X_w -axis on the body X, Z-plane and the body X-axis; degrees
β	BETA	sideslip angle, angle between the wind X_w -axis and the projection of this axis on the body X-Z-plane; degrees
ψ	PSI	yaw angle, angle of rotation about the body Z-axis, positive when the positive X-axis is rotated toward the positive Y-axis; degrees
ϕ	PHI	roll angle, angle of rotation about the body X-axis, positive when the positive Y-axis is rotated toward the positive Z-axis; degrees
ρ		air density; K_g/m^3 , slugs/ft ³
a		speed of sound; m/sec, ft/sec
V		speed of vehicle relative to surrounding atmosphere; m/sec, ft/sec
q	$Q(PSI)$ $Q(PSF)$	dynamic pressure; $1/2\rho V^2$, psi, psf
M	MACH	Mach number; V/a
RN/L	RN/L	Reynolds number per unit length; million/ft
p		static pressure; psi
P		total pressure; psi
C_p	CP	pressure coefficient; $(p-p_\infty)/q$

NOMENCLATURE (Continued)

Reference & C. G. Definitions

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
S		wing area; m^2 , ft^2
S	SREF	reference area; m^2 , ft^2
\bar{c}		wing mean aerodynamic chord or reference chord; m, ft, in (see l_{ref} or LREF)
l_{ref}	LREF	reference length; m, ft, in.; (see \bar{c})
b_{ref}	BREF	wing span or reference span; m, ft, in
A_b		base area; m^2 , ft^2 , in^2
c. g.		center of gravity
MRP	MRP	abbreviation for moment reference point
	XMRP	abbreviation for moment reference point on X-axis
	YMRP	abbreviation for moment reference point on Y-axis
	ZMRP	abbreviation for moment reference point on Z-axis

NOMENCLATURE (Continued)

Axis System General

SYMBOL

DEFINITION

F	force; F, lbs
M	moment; M, in-lb

Subscript

Definition

N	normal force
A	axial force
L	lift force
D	drag force
Y	force or moment about the Y axis
Z	moment about the Z axis
X	moment about the X axis
s	stability axis system
w	wind axis system
ref	reference conditions
∞	free stream conditions
t	total conditions
b	base

NOMENCLATURE (Continued)
Body & Stability Axis System

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
<u>Body Axis System</u>		
C_N	CN	normal force coefficient; F_N/qS
C_A	CA	axial force coefficient; F_A/qS
C_{A_b}	CAB	base axial force coefficient; $\begin{bmatrix} -1 \end{bmatrix} \begin{bmatrix} (P_b - p_\infty)/q \end{bmatrix} (A_b/S)$
C_{A_f}	CAF	forebody axial force coefficient; $C_A - C_{A_b}$
C_n	CYN	yawing moment coefficient; $M_Z/qS b_{ref}$
C_l	CBL	rolling moment coefficient; $M_X/qS b_{ref}$
<u>Common to Both Axis Systems</u>		
C_m	CLM	pitching moment coefficient; $M_Y/qS l_{ref}$
C_y	CY	side force coefficient; F_Y/qS
<u>Stability Axis System</u>		
C_L	CL	lift force coefficient; F_L/qS
C_D	CD	drag force coefficient; F_D/qS
C_{D_b}	CDB	base drag coefficient
C_{D_f}	CDF	forebody drag coefficient; $C_D - C_{D_b}$
C_n	CLN	yawing moment coefficient; $M_{Z,s}/qS b_{ref}$
C_l	CSL	rolling moment coefficient; $M_{X,s}/qS b_{ref}$
L/D	L/D	lift-to-drag ratio; C_L/C_D
L/D_f	L/DF	lift to forebody drag ratio; C_L/C_{D_f}

NOMENCLATURE (Continued)

Surface Definitions

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
i_t	HORIZT	horizontal tail incidence; positive when trailing edge down; degrees
δ		symmetrical surface deflection angle; degrees; positive deflections are:
	AILRON	aileron - total aileron deflection; (left aileron - right aileron)/2
	CANARD	canard - trailing edge down
	ELEVON	elevon - trailing edge down
	ELEVTR	elevator - trailing edge down
	FLAP	flap - trailing edge down
	RUDDER	rudder - trailing edge to the left
	SPOILR	spoiler - trailing edge down
	TAB	tab - trailing edge down with respect to control surface
δ		antisymmetrical surface deflection angle, degrees; positive trailing edge down:
	AIL-L	left aileron - trailing edge down
	AIL-R	right aileron - trailing edge down
	ELVN-L	left elevon - trailing edge down
	ELVN-R	right elevon - trailing edge down
	SPLR-L	left spoiler - trailing edge down
	SPLR-R	right spoiler - trailing edge down

<u>SURFACE SUBSCRIPTS</u>	<u>DEFINITION</u>
a	aileron
b	base
c	canard
e	elevator or elevon
f	flap
r	rudder or ruddervator
s	spoiler
t	tail

A_{b2}	Lower half of base area (see Figure 6)
A_c	Balance cavity base area (see Figure 6)
A_{cp}	Balance cavity planform area with blade support. (See Figure 7)
P_{b1}	Upper base pressure (see Figure 6)
P_{b2}	Lower base pressure (see Figure 6)
P_{ba}	Average base pressure, $\frac{P_{b1} + P_{b2}}{2}$
X_1	Axial transfer distance from BMC to MRC (see Figure 7)
X_2	Moment arm from MRC to centroid of A_{cp} (see Figure 7)
DCN/DE	Rate of change of normal force coefficient with rate of change of elevon deflection
$DCIMDE$	Rate of change of pitching moment coefficient with rate of change of elevon deflection
DCA/DE	Rate of change of axial force coefficient with respect to rate of change of elevon deflection
DCN/DC	Rate of change of normal force coefficient with respect to rate of change of canard deflection
$DCIMDC$	Rate of change of pitching moment coefficient with respect to canard deflection
DCA/DC	Rate of change of axial force coefficient with rate of canard deflection
$DLTCN$	Incremental normal force coefficient due to control deflection

ADDITIONS TO NOMENCLATURE

(CONTINUED)

SYMBOL

DLTCIM	Incremental pitching moment coefficient due to control deflection
DLTCA	Incremental axial force coefficient due to control deflection
DLTCND	Incremental canard deflection angle/degrees
DLTELV	Incremental canard deflection angle/degrees

TABULATED DATA LISTING

A tabulated data listing, consisting of all aero data sets, both original and those created in arriving at the plotted material to be presented subsequently, is available as an addendum to this report. The tabular listing is made up in two sections:

- (a) a brief summary list of all data sets containing the identifier, the descriptor, and the resident dependent variables.
- (b) a full list of all data sets containing all resident or selected aerodynamic coefficients of the data sets as well as the above mentioned information.

The listing is currently sent on limited distribution to the following organizations:

NASA AMES	Mr. V. Stevens
NASA MSC	Mr. Ray Nelson
NASA MSFC	Mr. J. Weaver
GD/C	Mr. R. Lanflisi

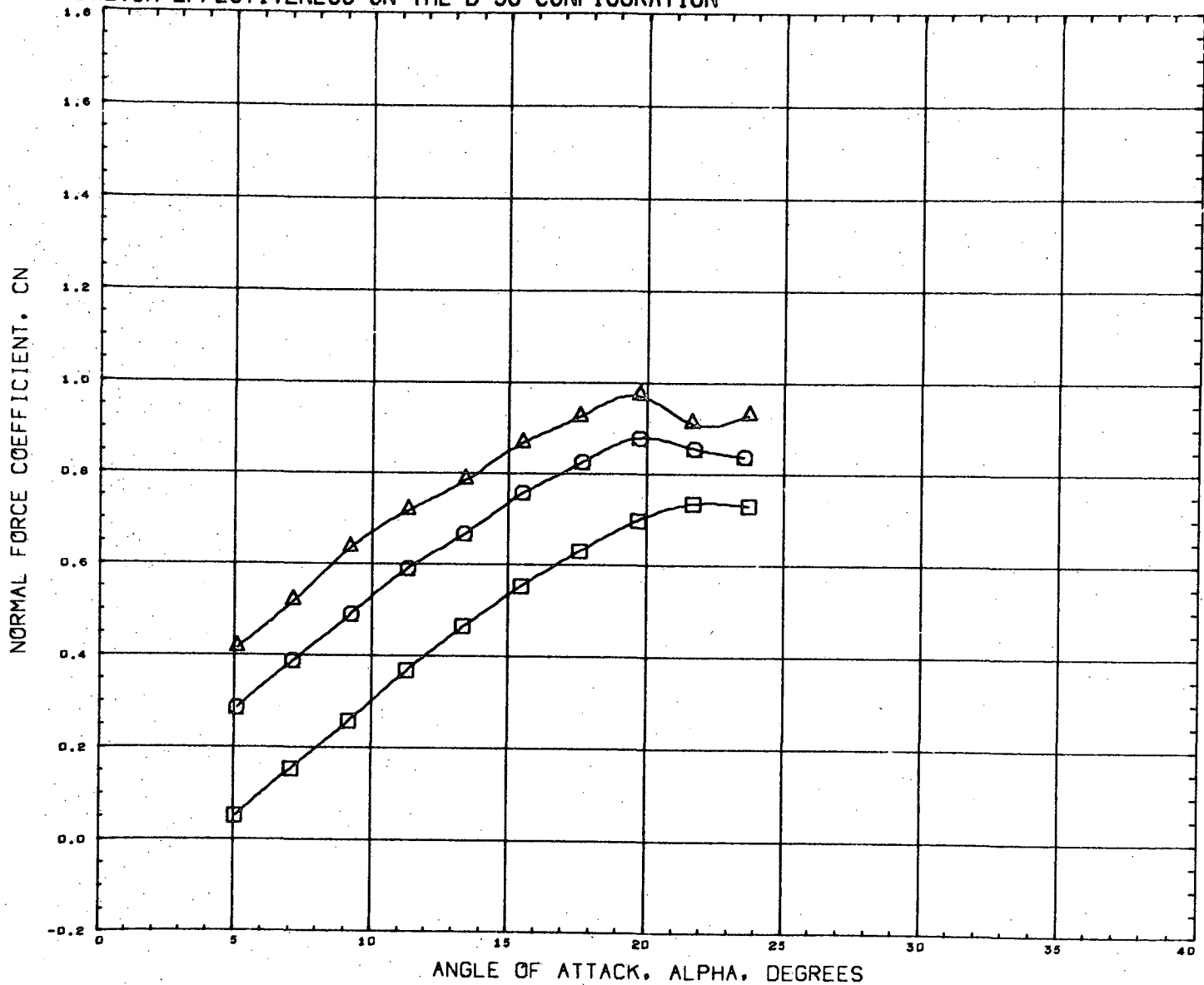
If copies of this listing are desired, please contact the above or the cognizant SADSAC personnel who, for this data, is:

Mr. J. R. Ziler
Department 2780
Chrysler Corporation Space Division
New Orleans, La. 70129

(504) 255-2304

PLOTTED DATA

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

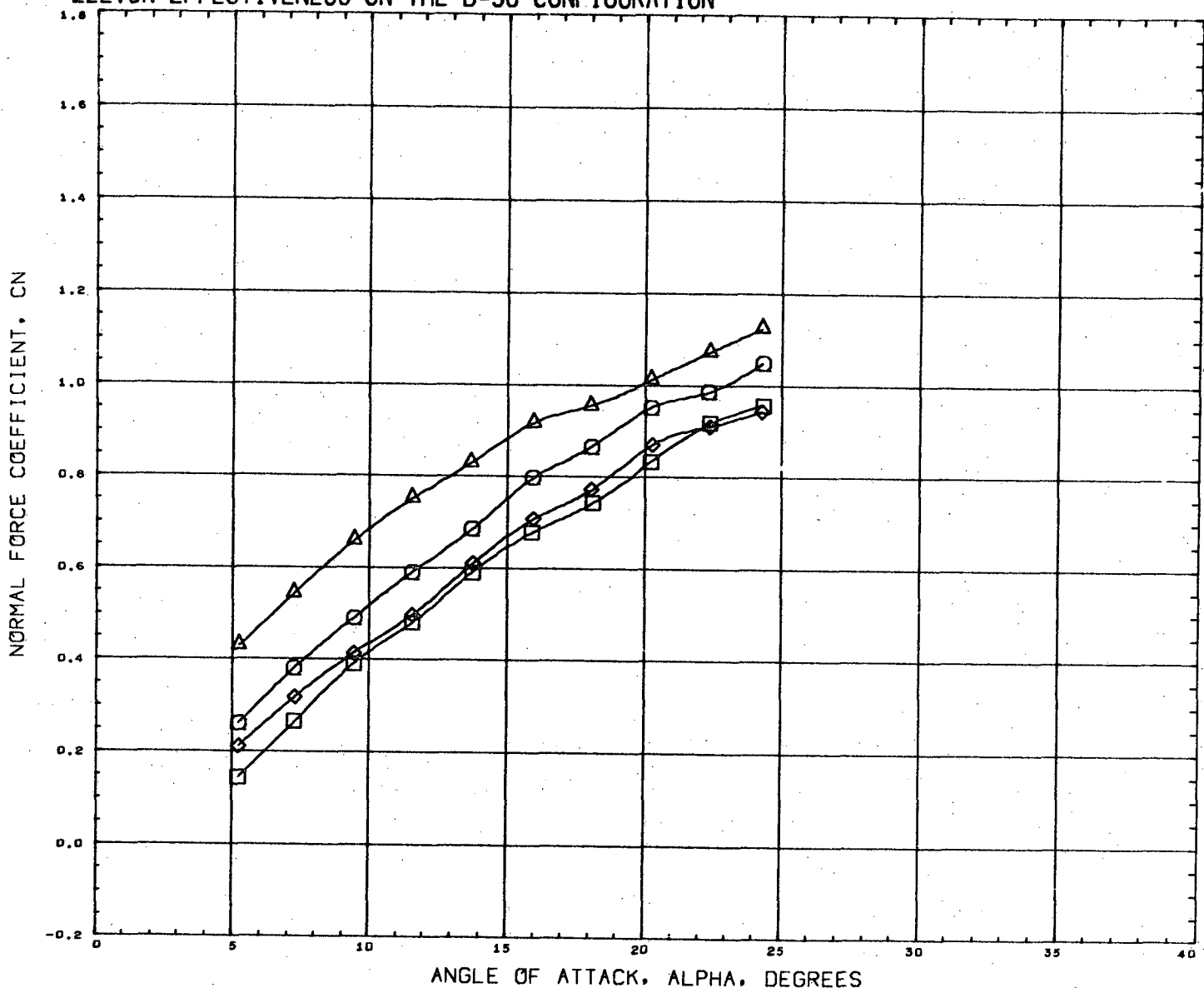


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(E35EAA)	MSFC TWT-493 GD/C B25W19C8V1D E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V1D E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 0.594

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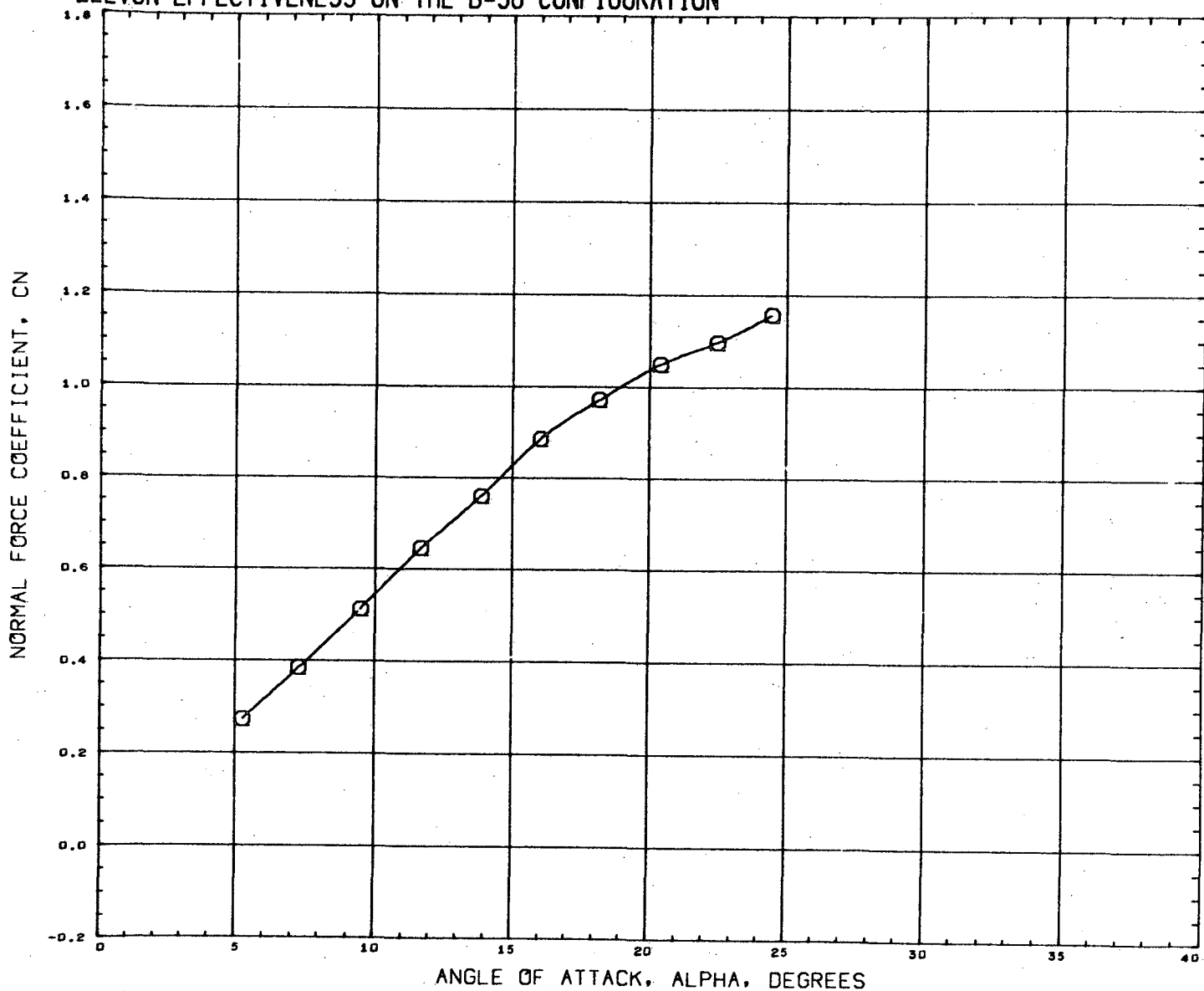
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	△	MSFC TWT-493 GD/C B25W19C8V1D E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35EAO)	○	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	◇	MSFC TWT-493 GD/C B25W19C8V1D E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	□	MSFC TWT-493 GD/C B25W19C8V1D E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRF 7.2990 IN.
							YMRF 0.0000 IN.
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							SCALE 0.0035

MACH 0.897

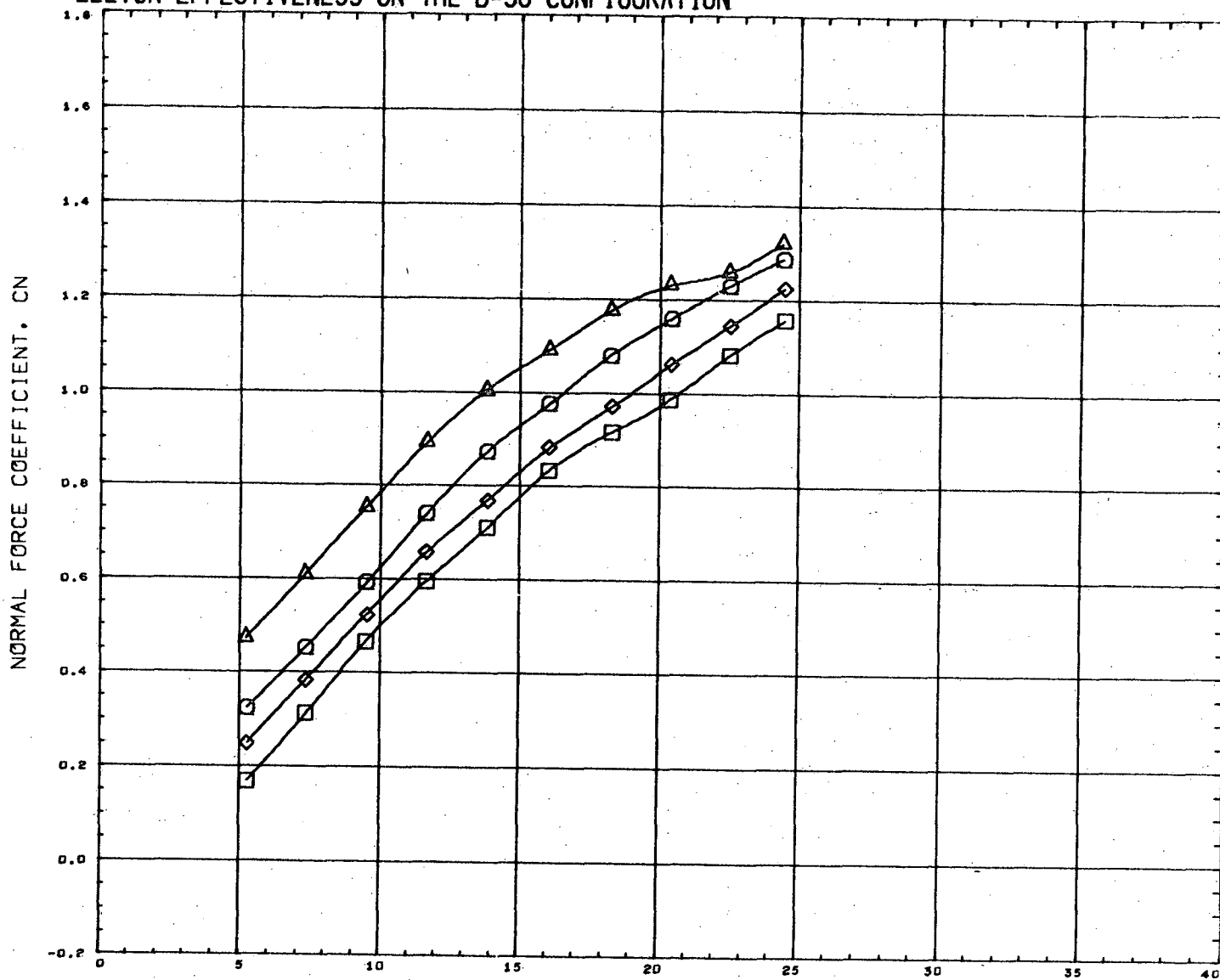
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=D C=D R=D	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 0.961

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

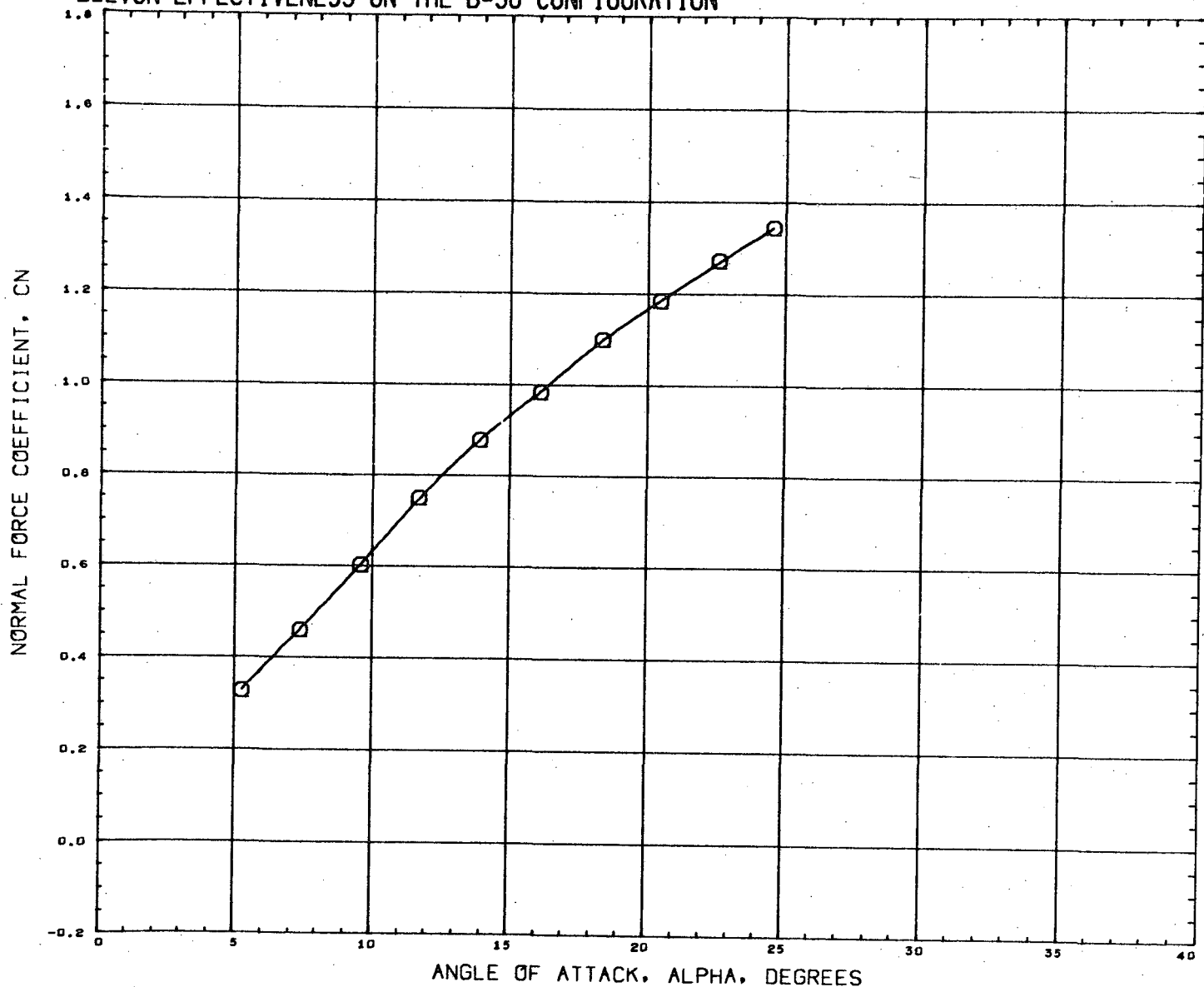


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(E35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
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MACH 0.999

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ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL CONFIGURATION DESCRIPTION

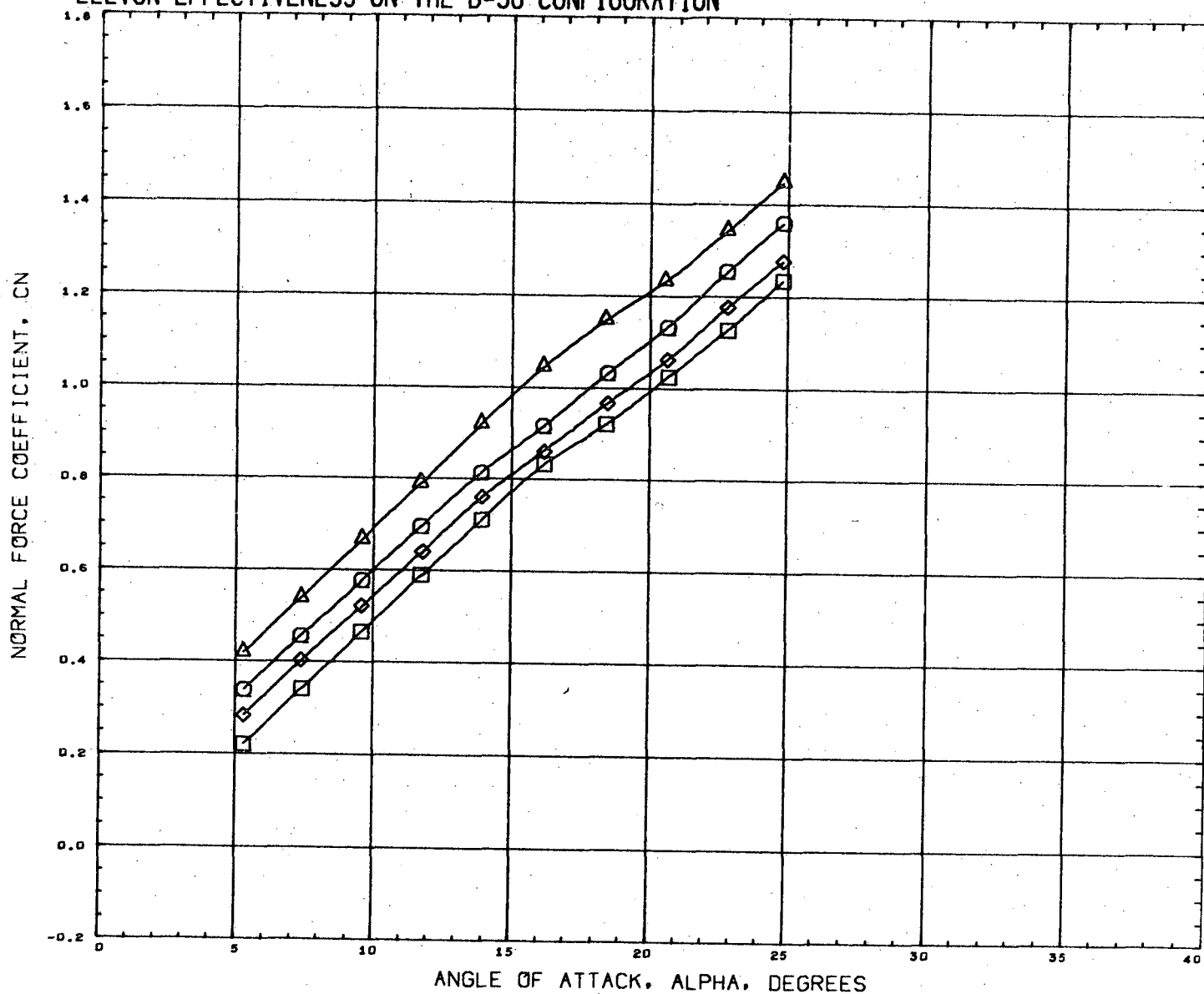
(E35EAA) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35EAO) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=D R=0
 (E35EAC) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35EAB) DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA	ELEVON	CANARD	RUDDER
0.000	10.000	0.000	0.000
0.000	0.000	0.000	0.000
0.000	-10.000	0.000	0.000
0.000	-20.000	0.000	0.000

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

MACH 1.043

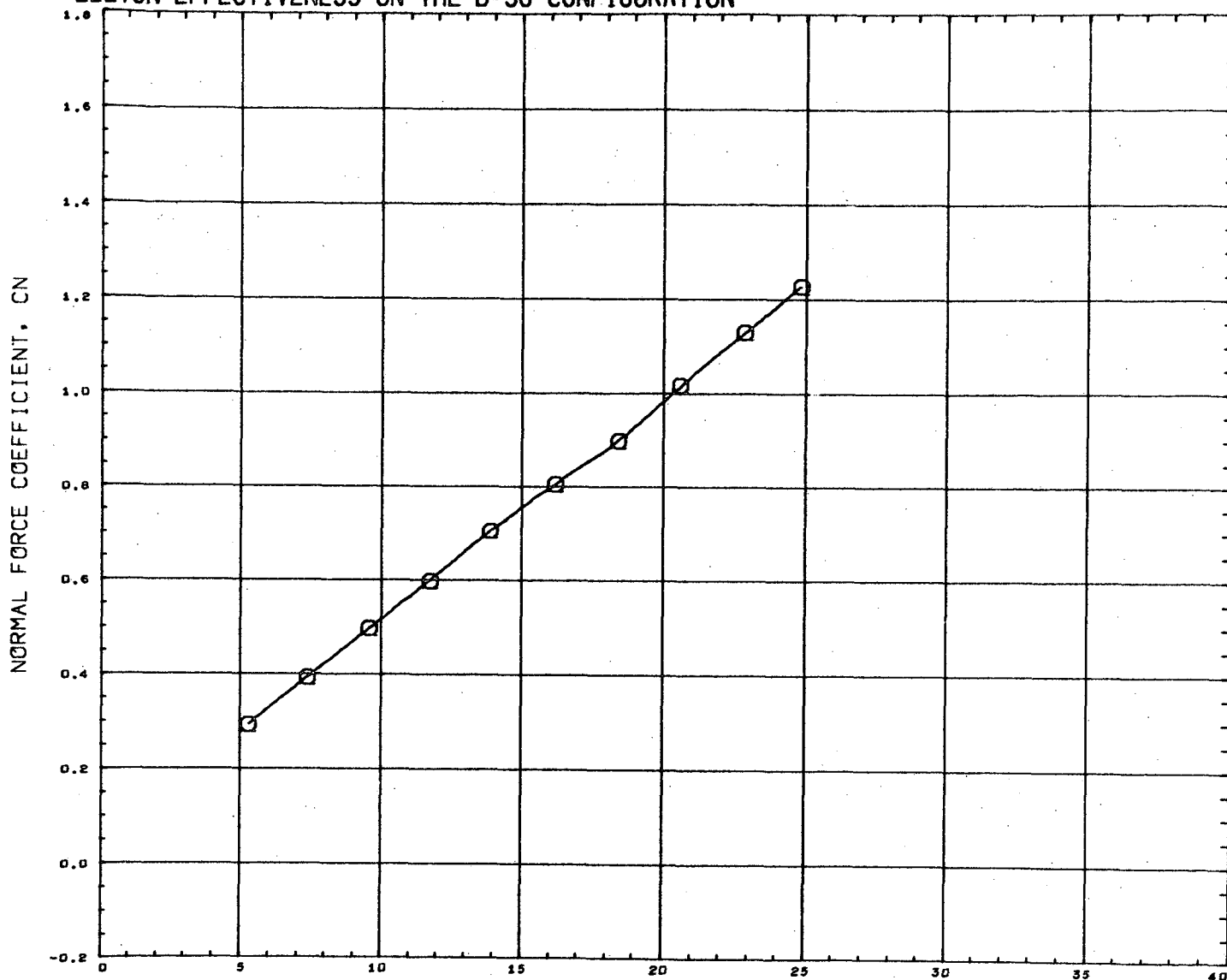
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 1.195

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

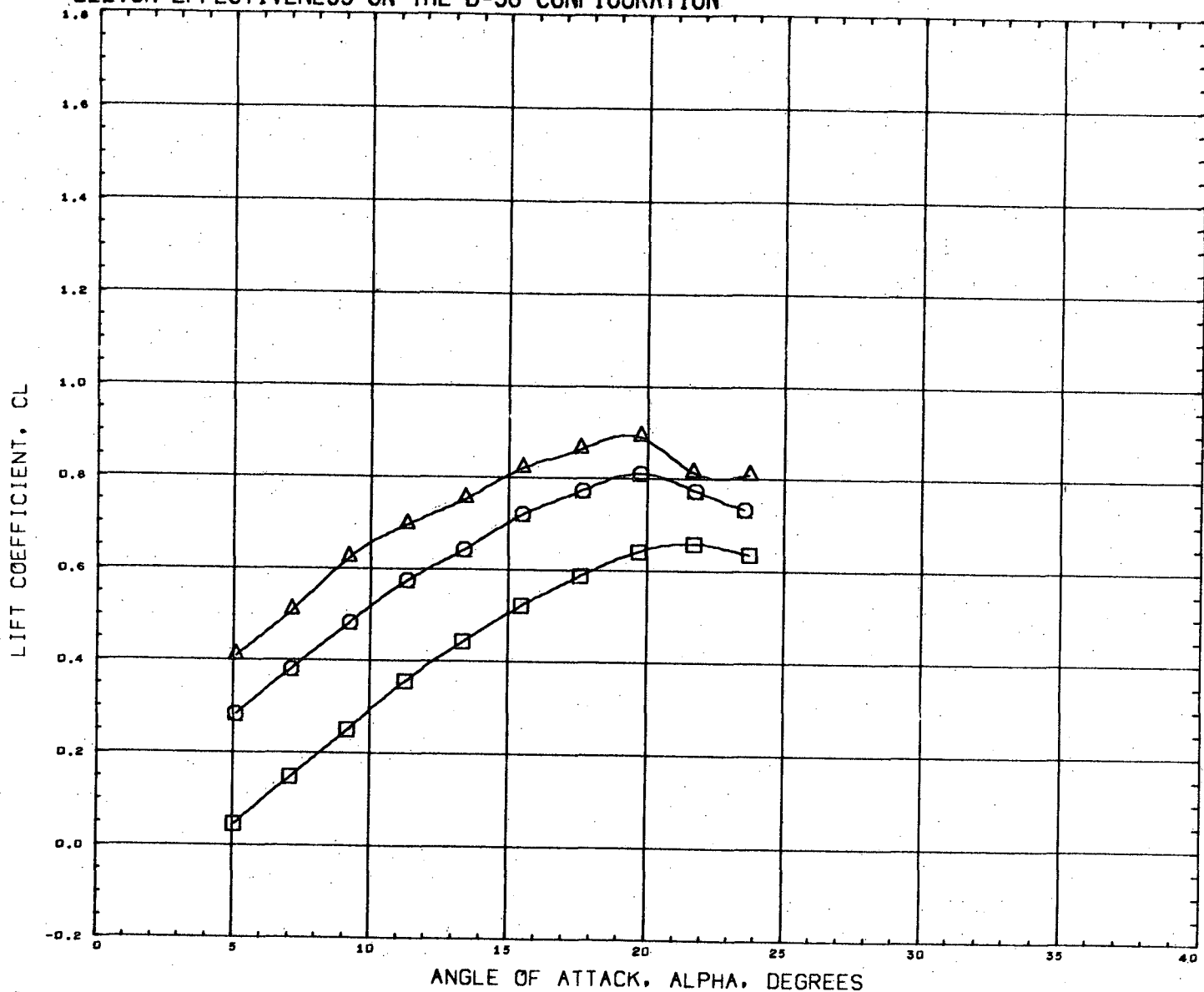


ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	△	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35EAO)	○	MSFC TWT-493 GD/C 825W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	⊗	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	□	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0035

MACH 1.453

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

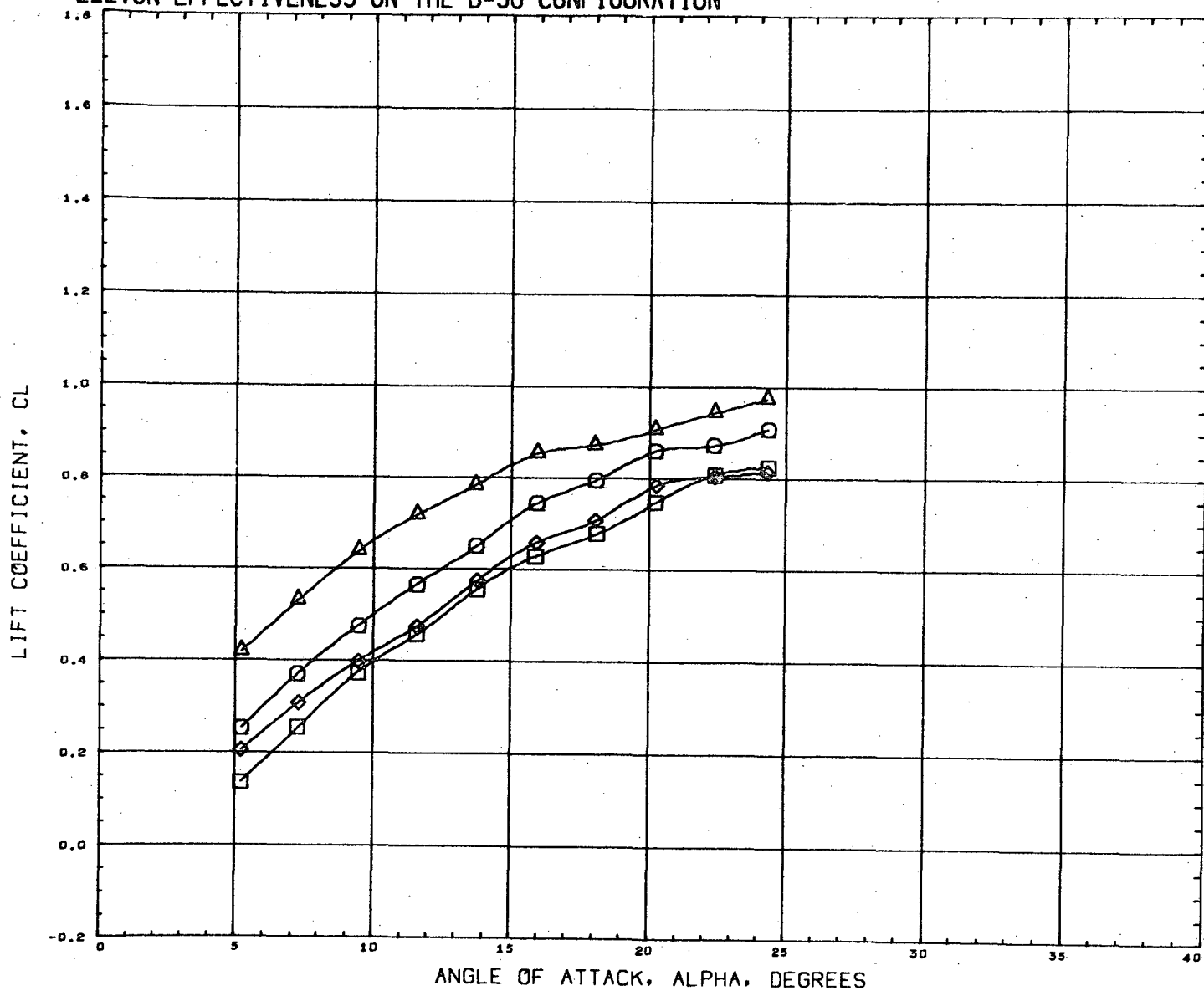


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=D R=D	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=D C=D R=D	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=D R=D	0.000	-20.000	0.000	0.000	XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 0.594

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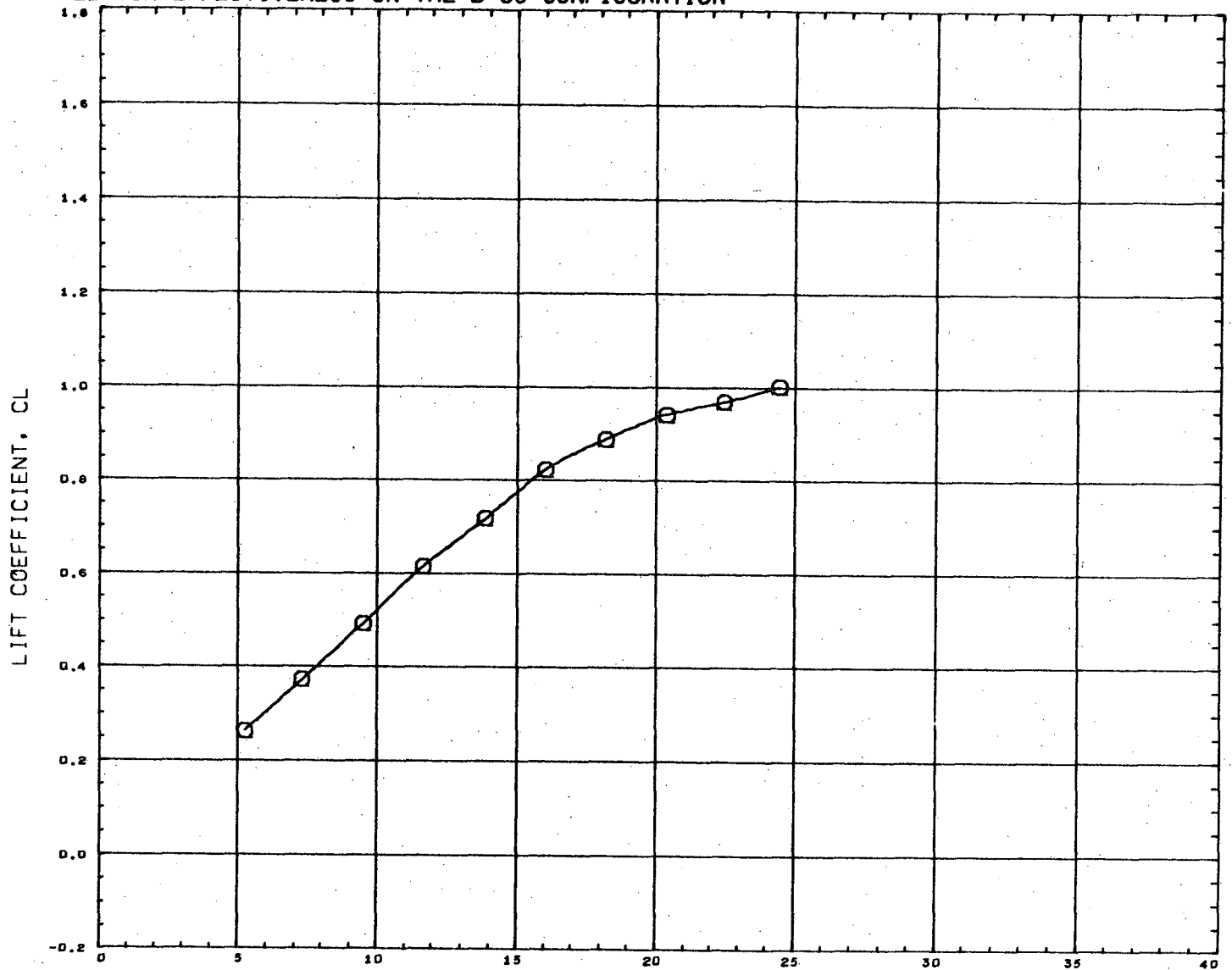
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
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						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 0.897

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

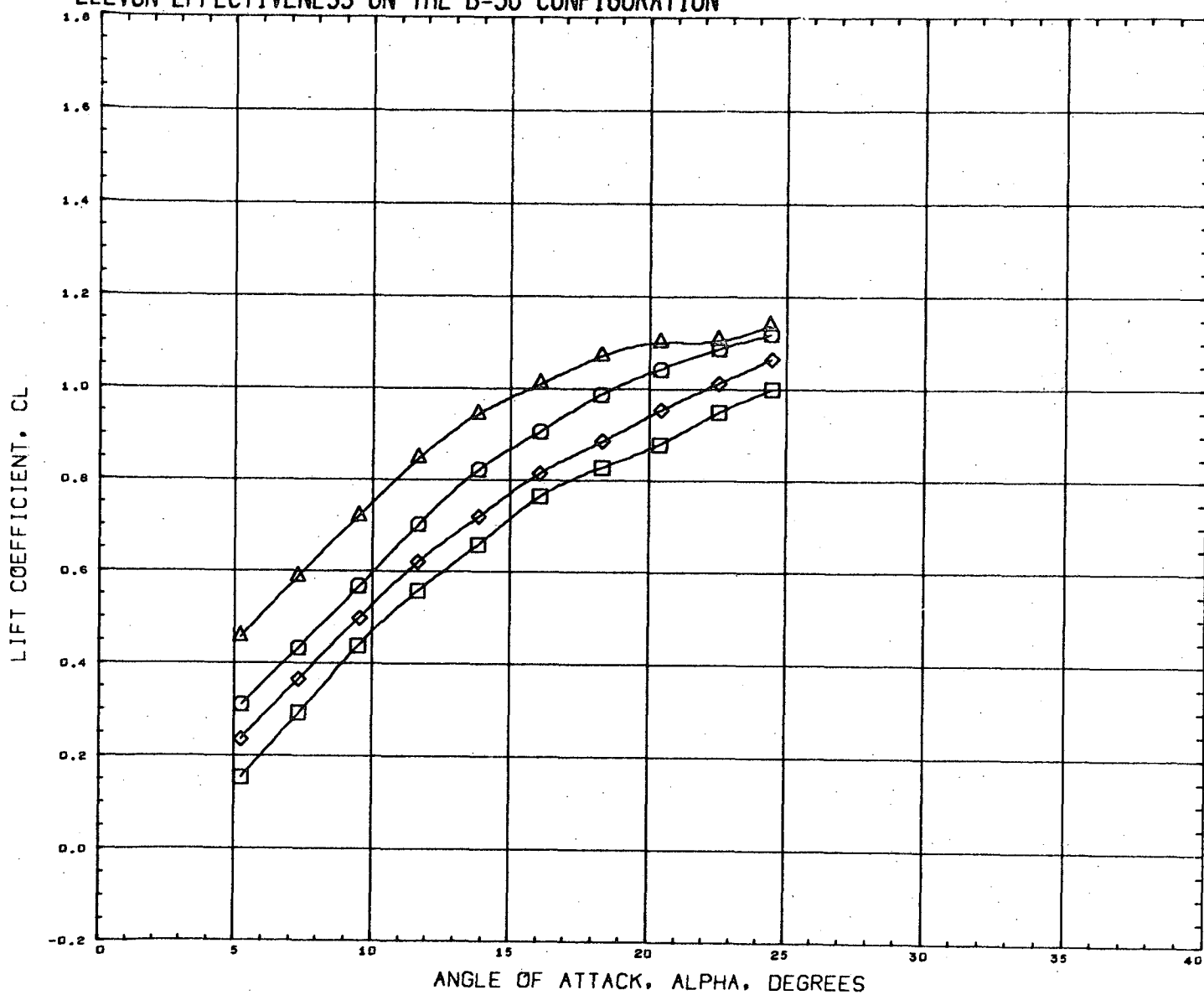


ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	10.000	0.000	0.000	SREF	14.9040 50. IN.
(E35EAO)	MSFC TWT-493 GD/C 825W19C8V10 E=D C=D R=D	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 0.961

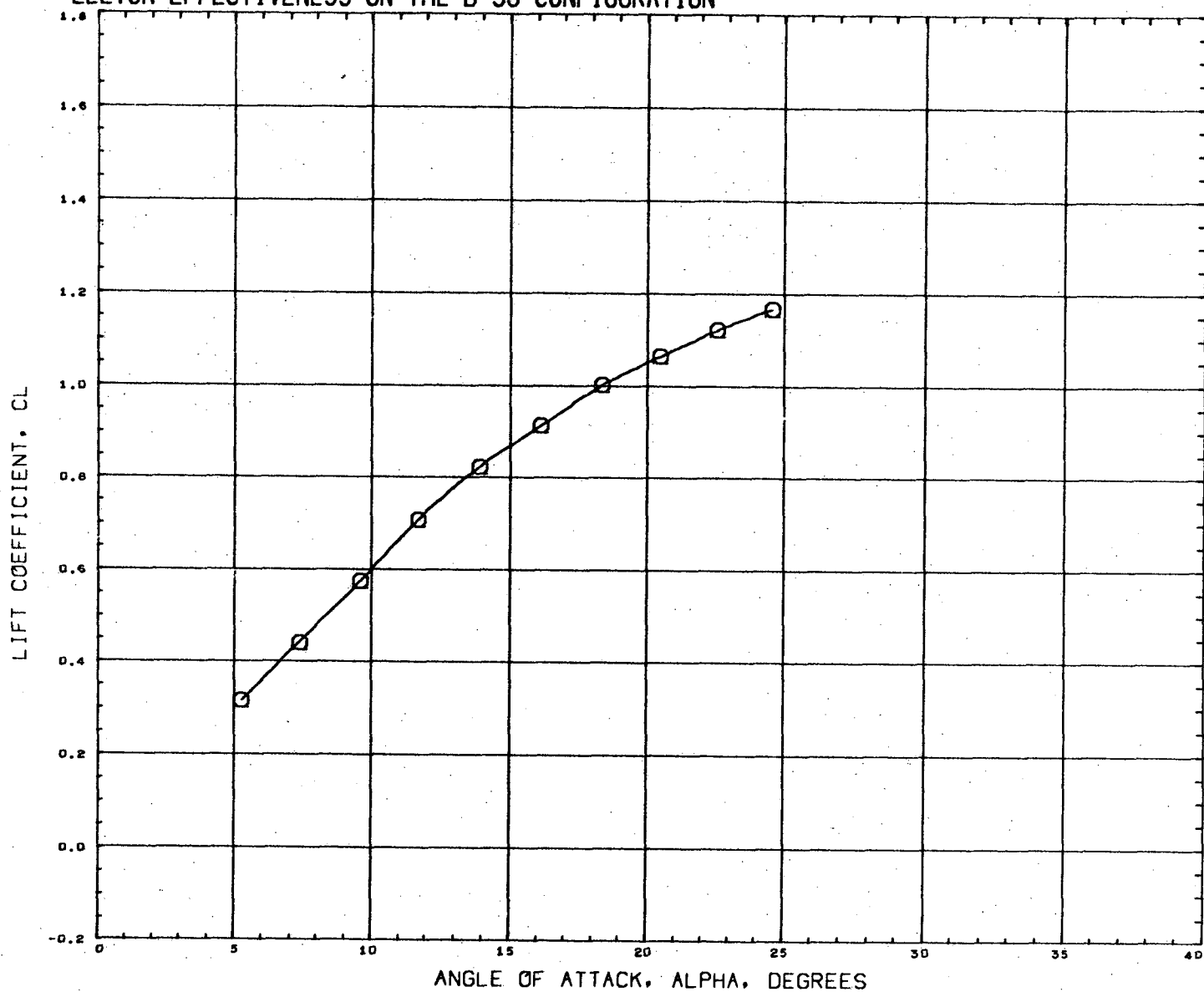
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 0.999

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL CONFIGURATION DESCRIPTION

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 (E35EAO) MSFC TWT-493 GD/C B25W19C8V1D E=0 C=0 R=0
 (E35EAC) DATA NOT AVAILABLE FOR ALL CONDITIONS
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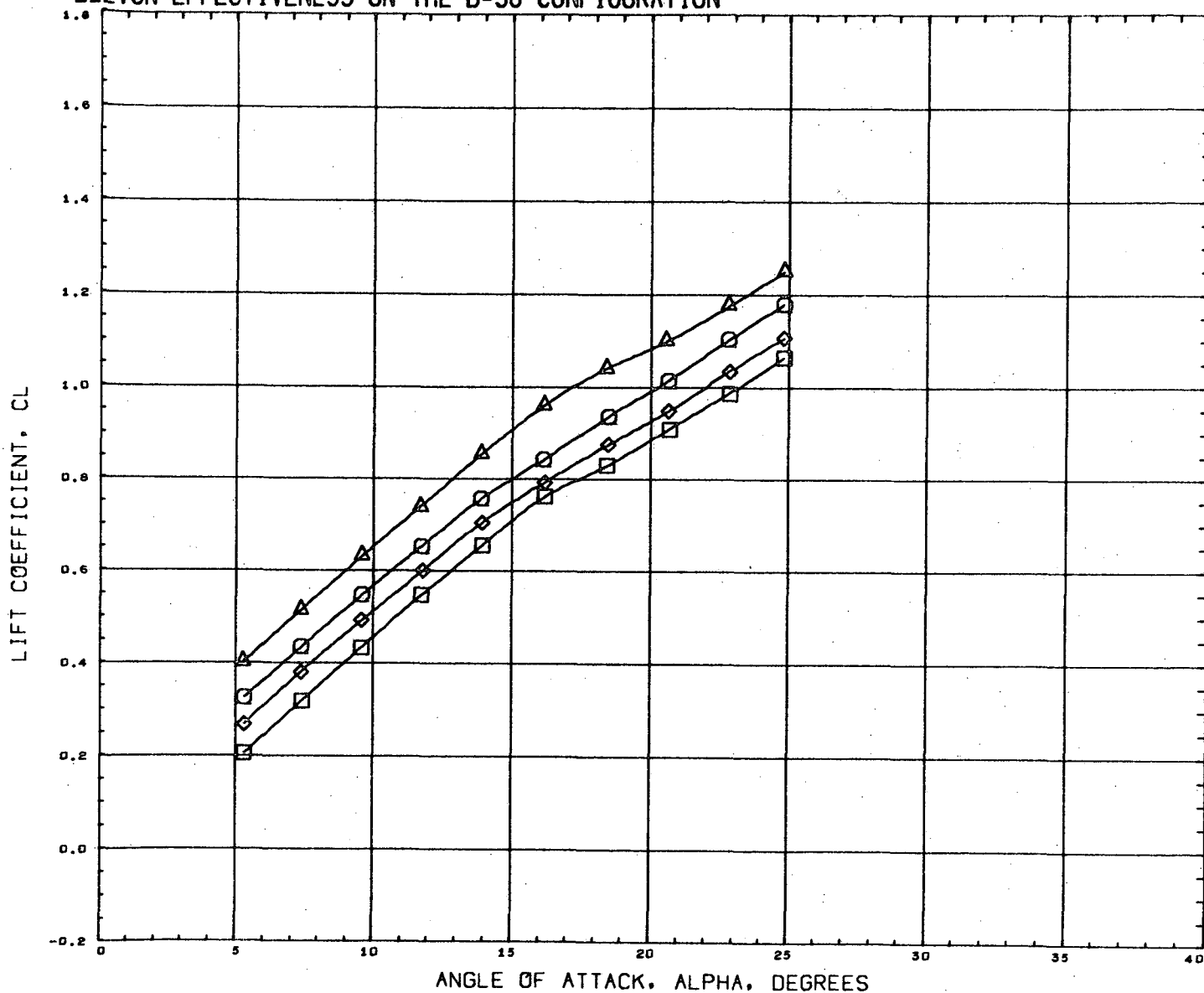
BETA	ELEVON	CANARD	RUDDER
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0.000	0.000	0.000	0.000
0.000	-10.000	0.000	0.000
0.000	-20.000	0.000	0.000

REFERENCE INFORMATION

SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

MACH 1.043

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E35EAA)	▲	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0
(E35EAO)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0
(E35EAC)	⊗	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0
(E35EAB)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0

BETA	ELEVON	CANARD	RUDDER
0.000	10.000	0.000	0.000
0.000	0.000	0.000	0.000
0.000	-10.000	0.000	0.000
0.000	-20.000	0.000	0.000

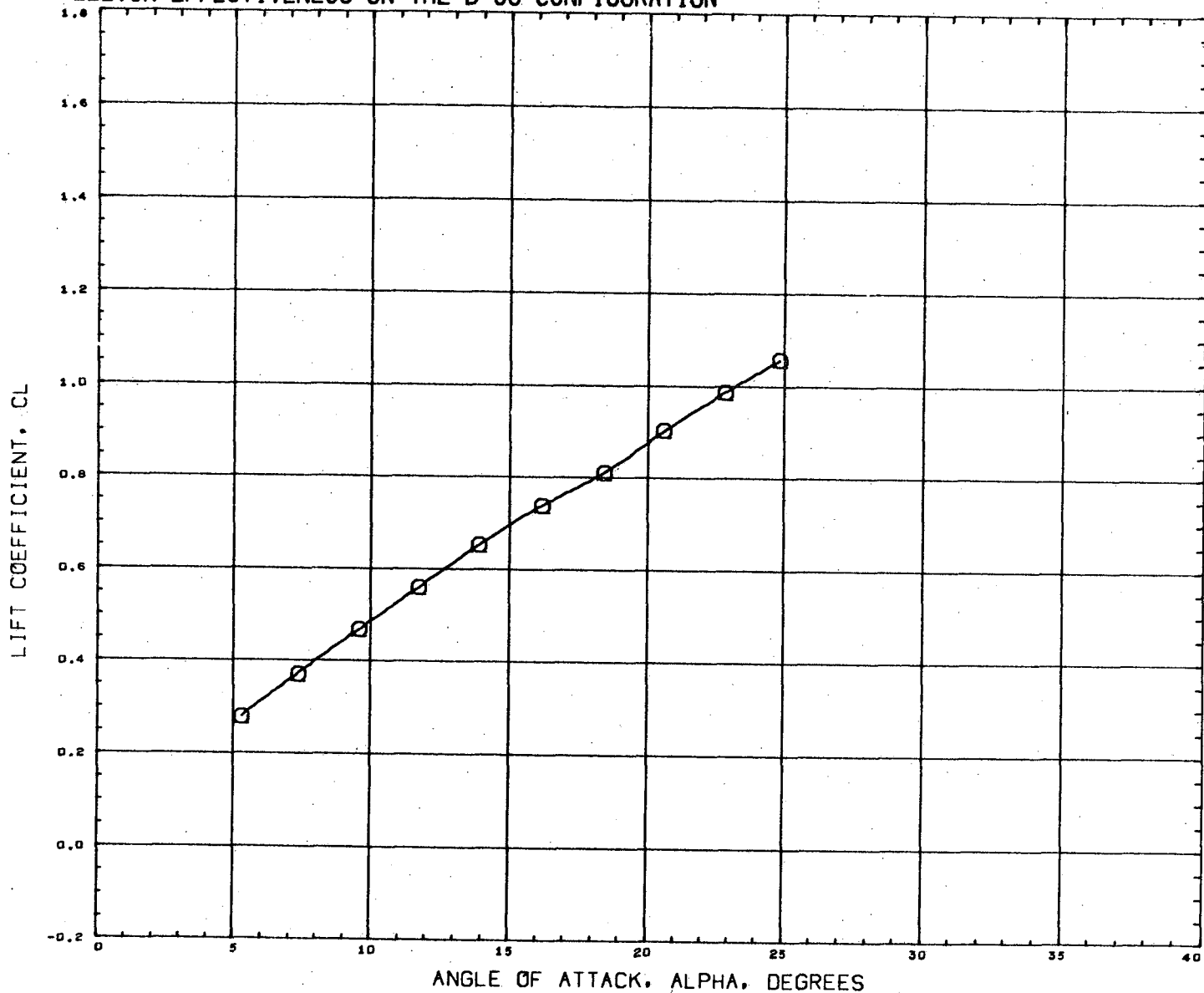
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BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MACH 1.195

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ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

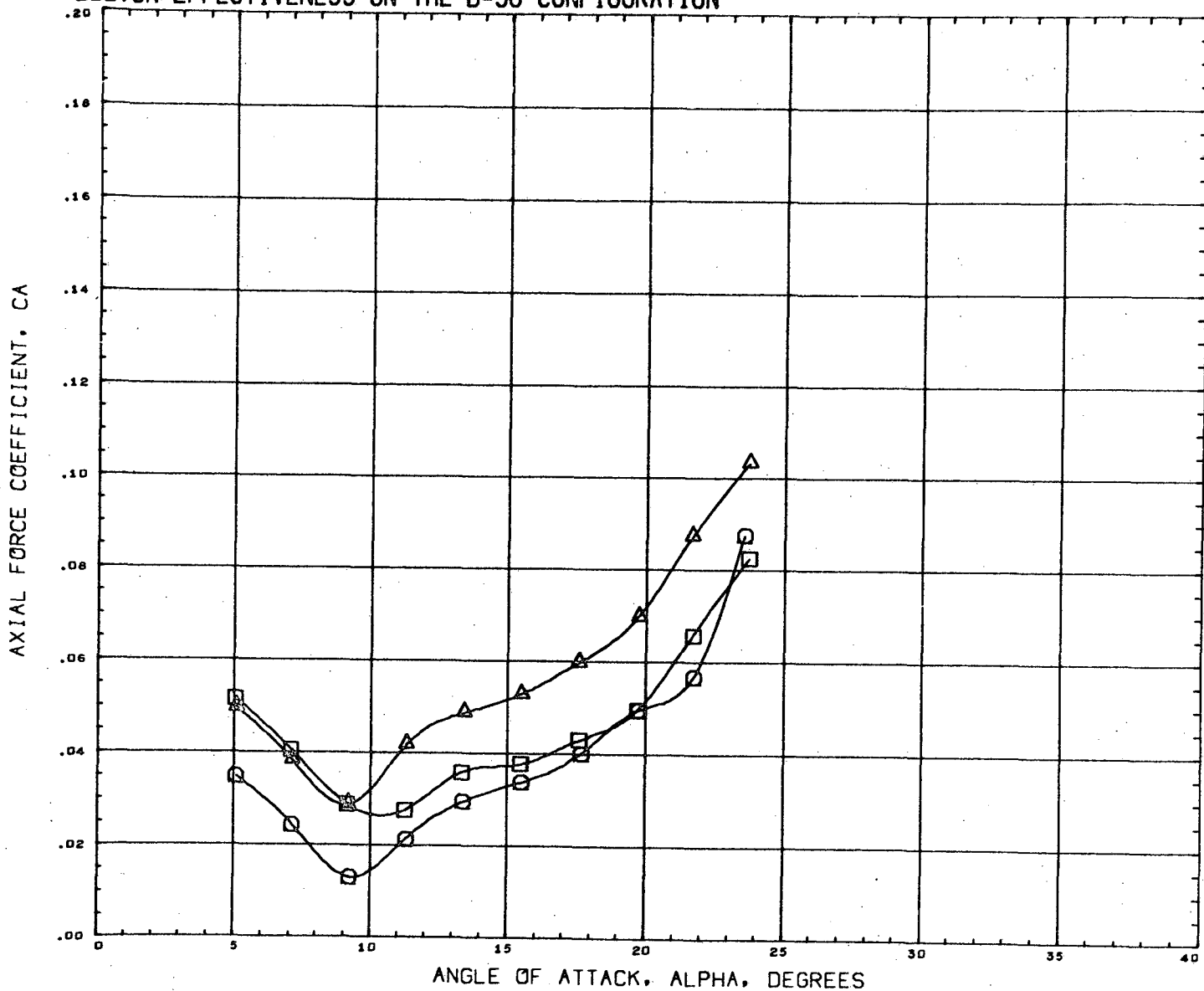


ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
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MACH 1.453

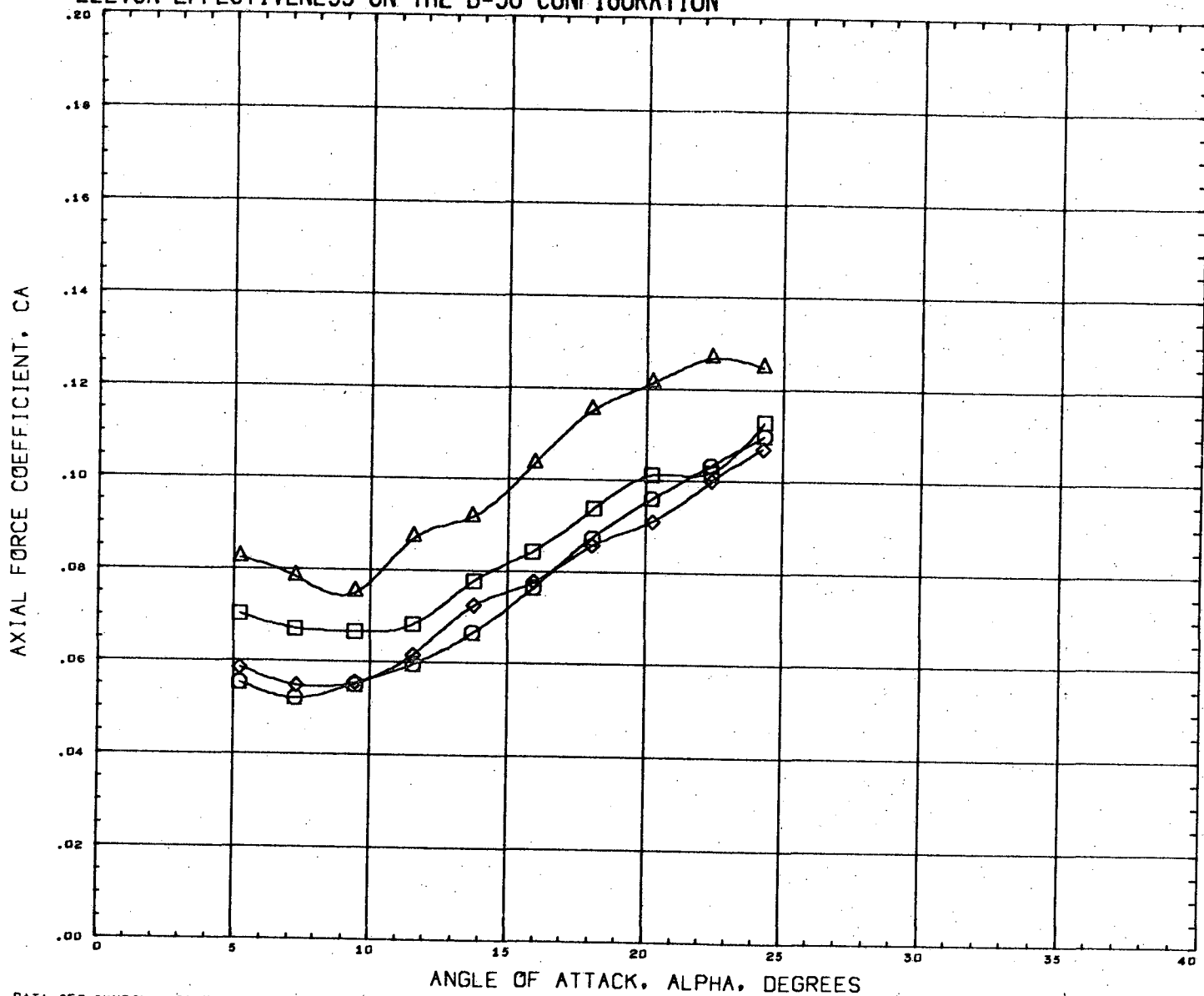
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35EAO)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	◇	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
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MACH 0.594

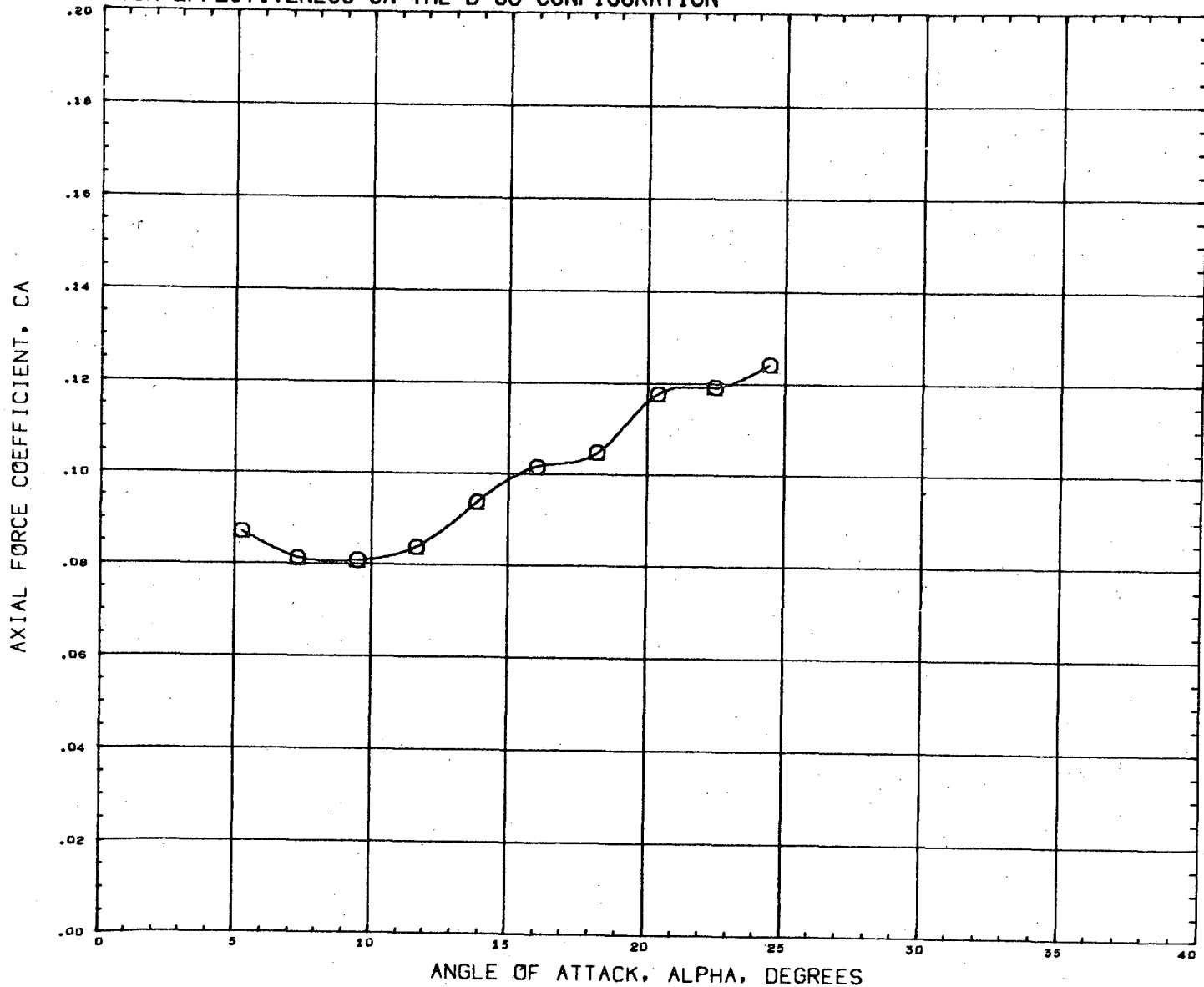
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=D R=D	0.000	10.000	0.000	0.000	SREF 14.9040 sq. in.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=D R=D	0.000	0.000	0.000	0.000	LREF 3.0120 in.
(E35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=D R=D	0.000	-10.000	0.000	0.000	BREF 6.0180 in.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=D R=D	0.000	-20.000	0.000	0.000	XMRF 7.2990 in.
						YMRF 0.0000 in.
						ZMRF 0.0000 in.
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MACH 0.897

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



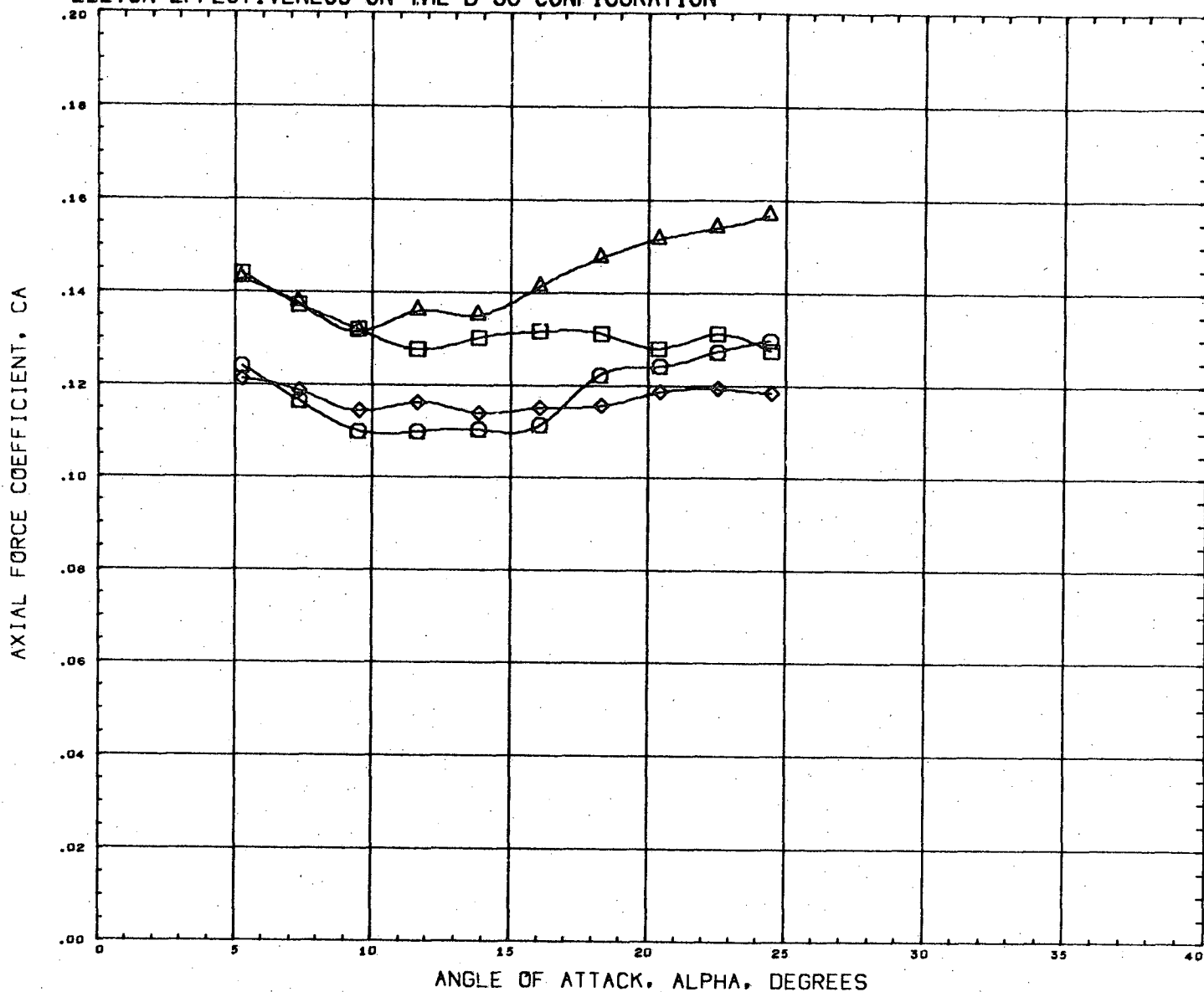
DATA SET SYMBOL CONFIGURATION DESCRIPTION

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 (E35EAO) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0
 (E35EAC) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35EAB) DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
0.000	10.000	0.000	0.000	SREF 14.9040 SQ.IN.
0.000	0.000	0.000	0.000	LREF 3.0120 IN.
0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

MACH 0.961

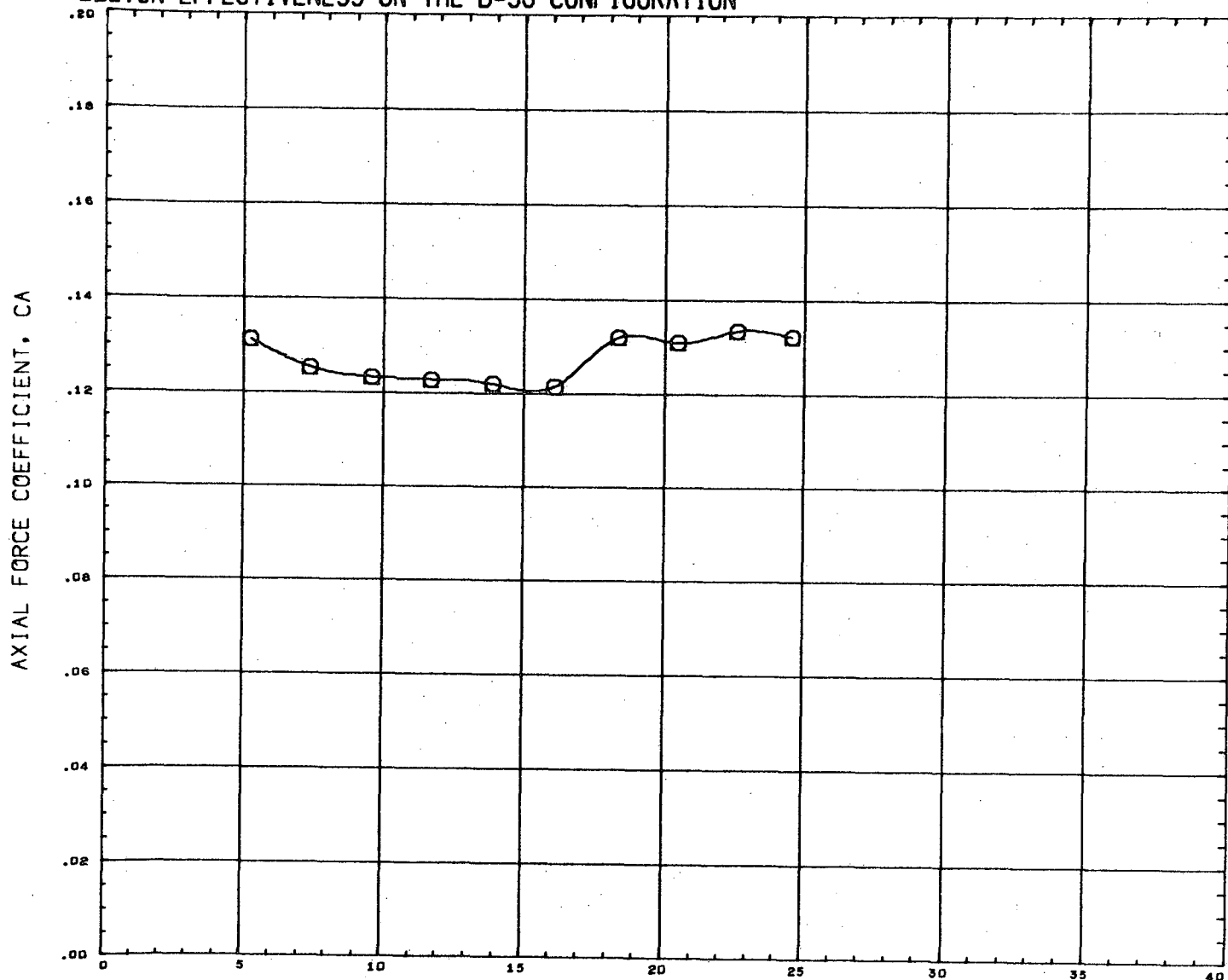
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=D R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35EAO)	□	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=D R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	◇	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=D R=0	0.000	-10.000	0.000	0.000	BREF 6.0160 IN.
(E35EAB)	○	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=D R=0	0.000	-20.000	0.000	0.000	XMRF 7.2990 IN.
							YMRF 0.0000 IN.
							ZMRF 0.0000 IN.
							SCALE 0.0035

MACH 0.999

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E35EAA) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35EAO) MSFC TWI-493 GD/C B25W19C8V10 E=0 C=D R=D
 (E35EAC) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35EAB) DATA NOT AVAILABLE FOR ALL CONDITIONS

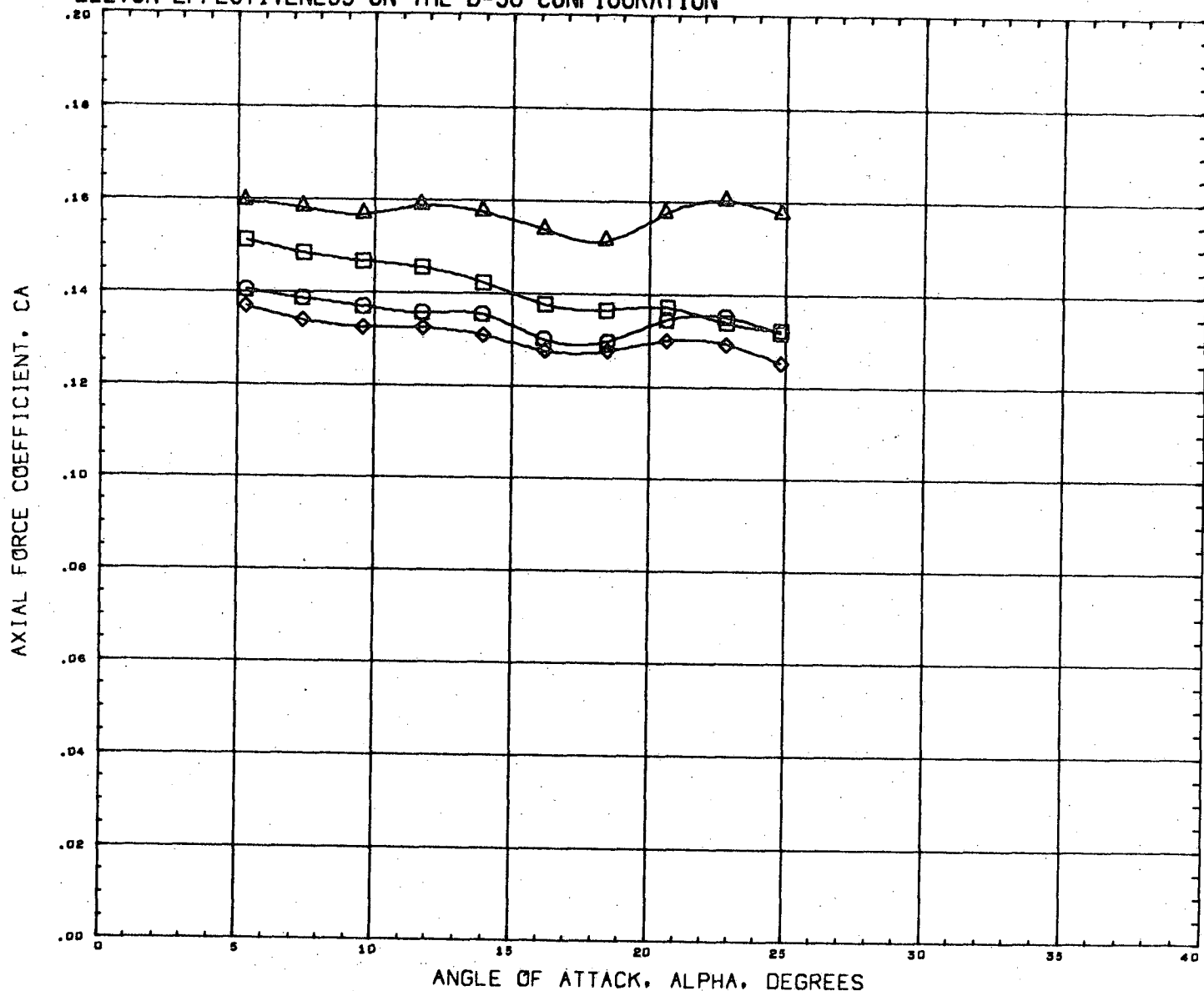
BETA	ELEVON	CANARD	RUDDER
0.000	10.000	0.000	0.000
0.000	0.000	0.000	0.000
0.000	-10.000	0.000	0.000
0.000	-20.000	0.000	0.000

REFERENCE INFORMATION

SREF	14.9040	50. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

MACH 1.043

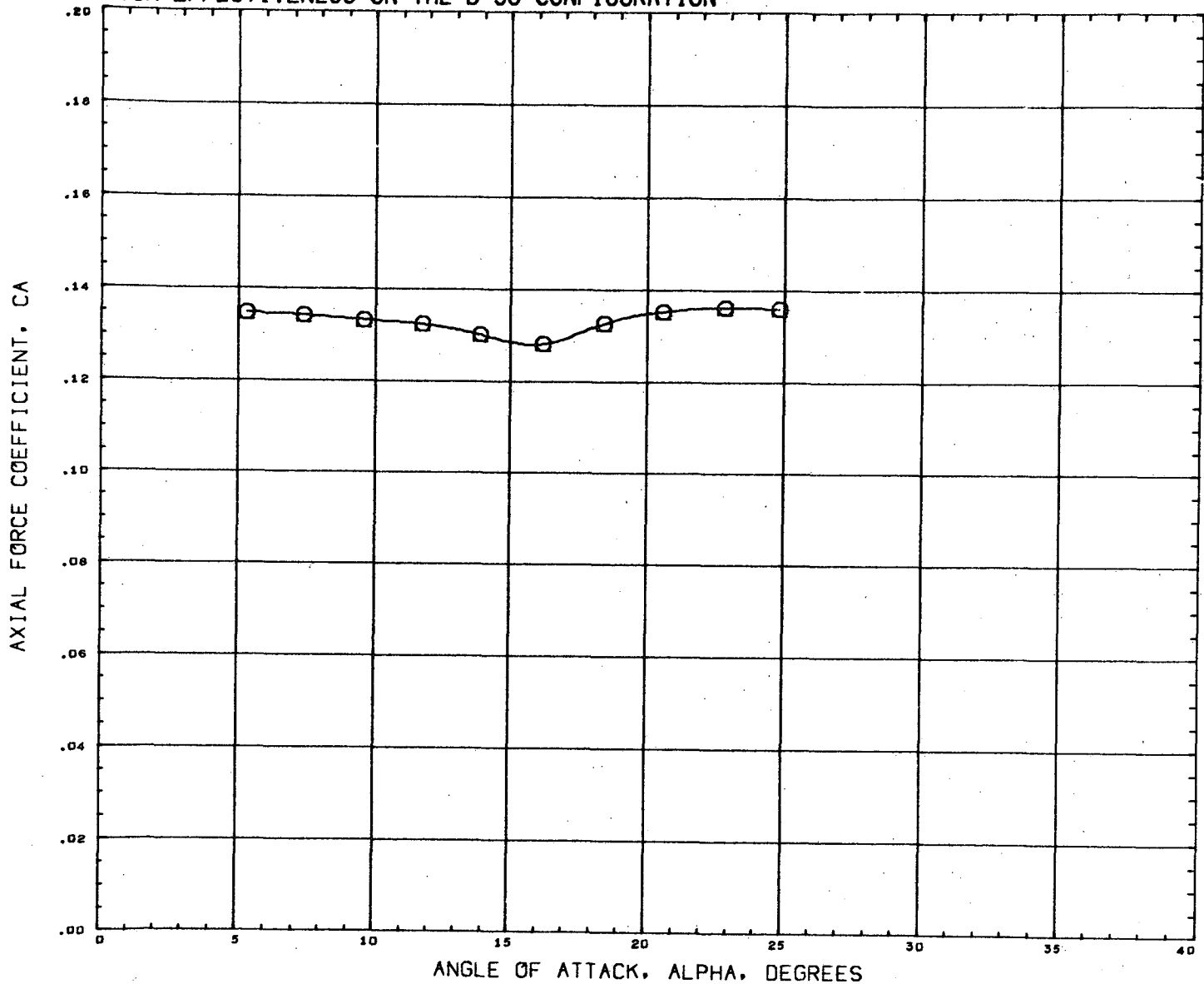
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.195

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



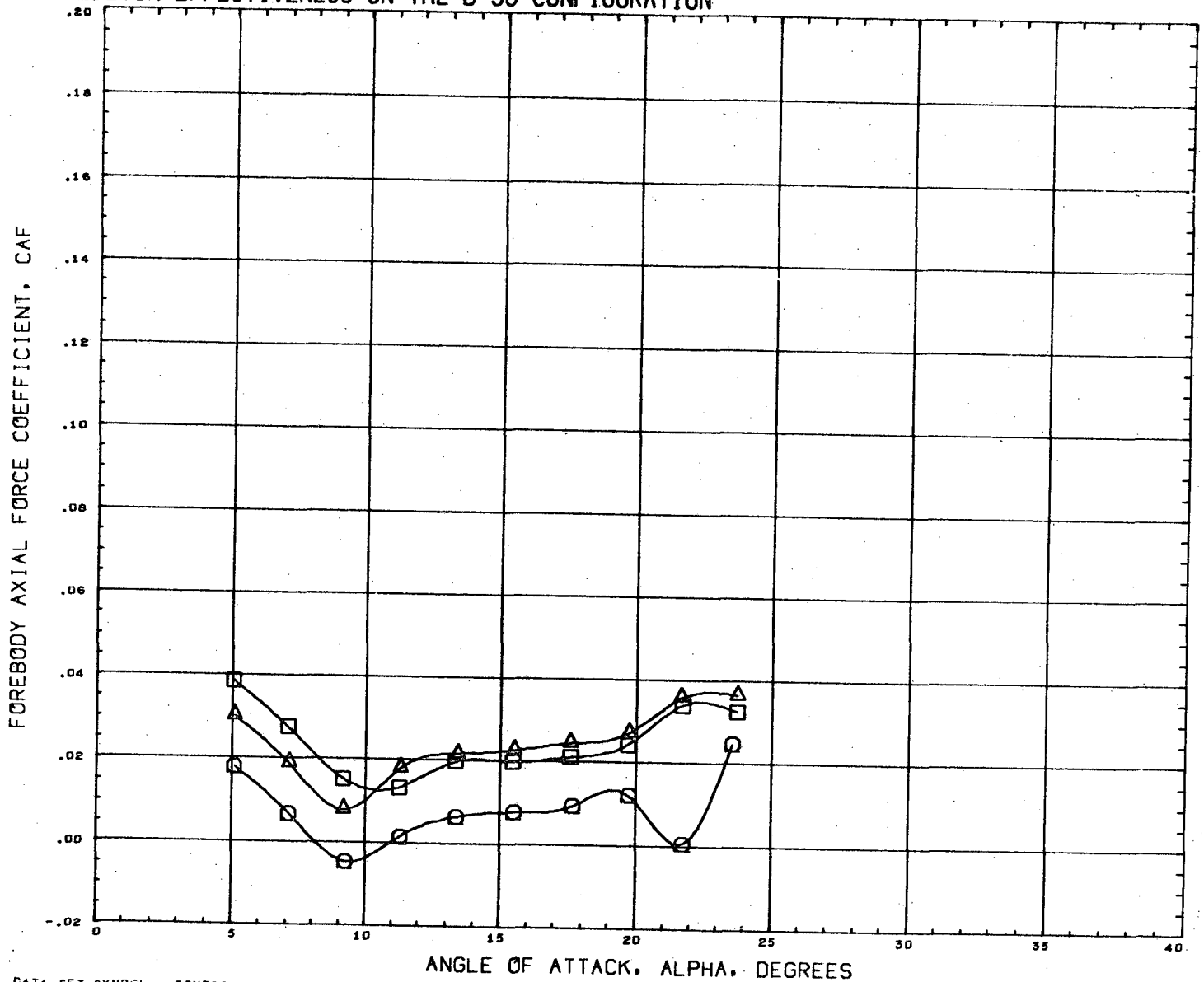
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E35EAA) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35EAO) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0
 (E35EAC) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35EAB) DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
0.000	0.000	0.000	0.000	LREF	3.0120 IN.
0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
0.000	-20.000	0.000	0.000	XMRF	7.2990 IN.
				YMRF	0.0000 IN.
				ZMRF	0.0000 IN.
				SCALE	0.0035

MACH 1.453

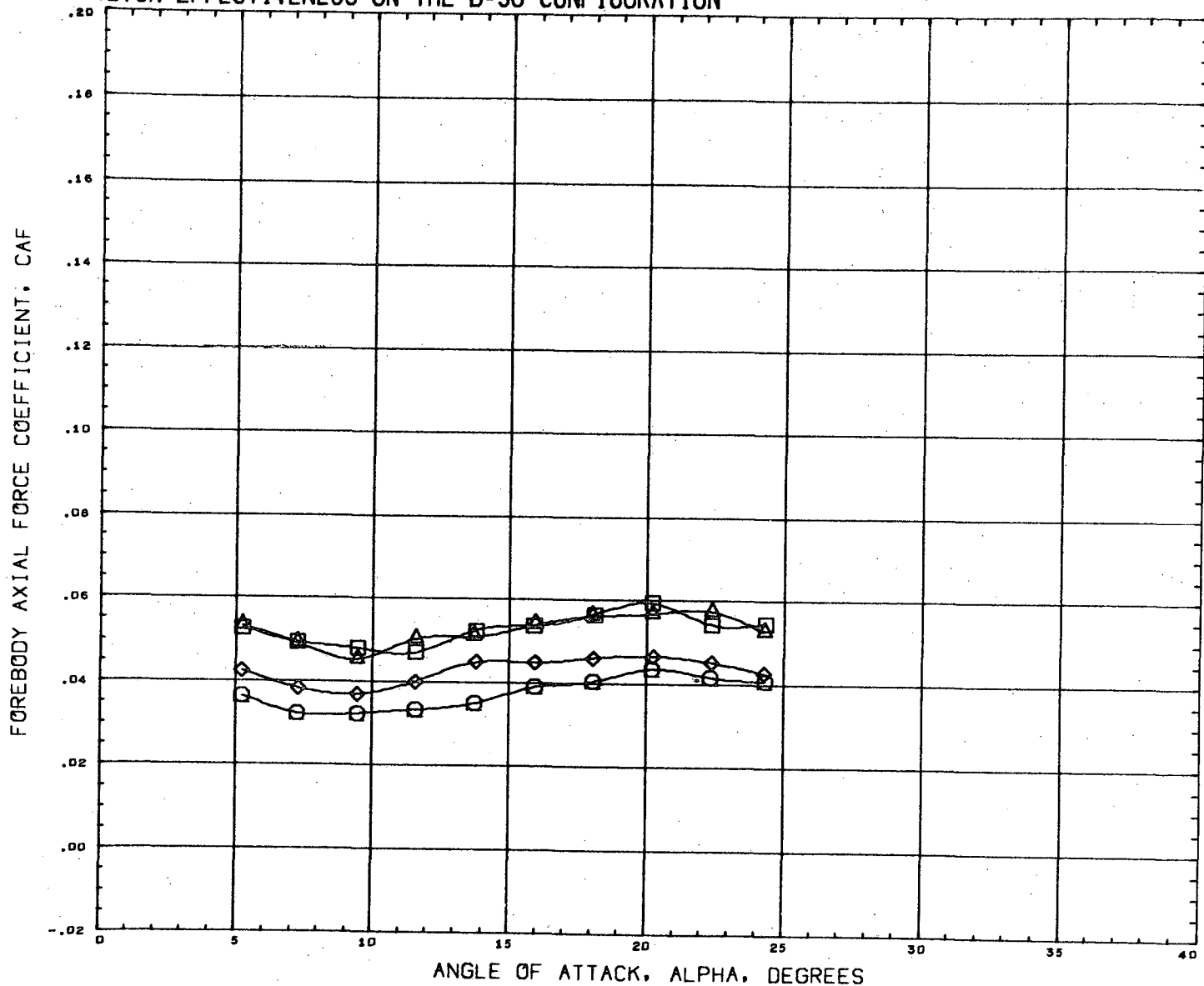
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35EAO)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	□	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	◇	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0035

MACH 0.594

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E35EAA)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0
(E35EAO)	◇	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0
(E35EAC)	○	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0
(E35EAB)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0

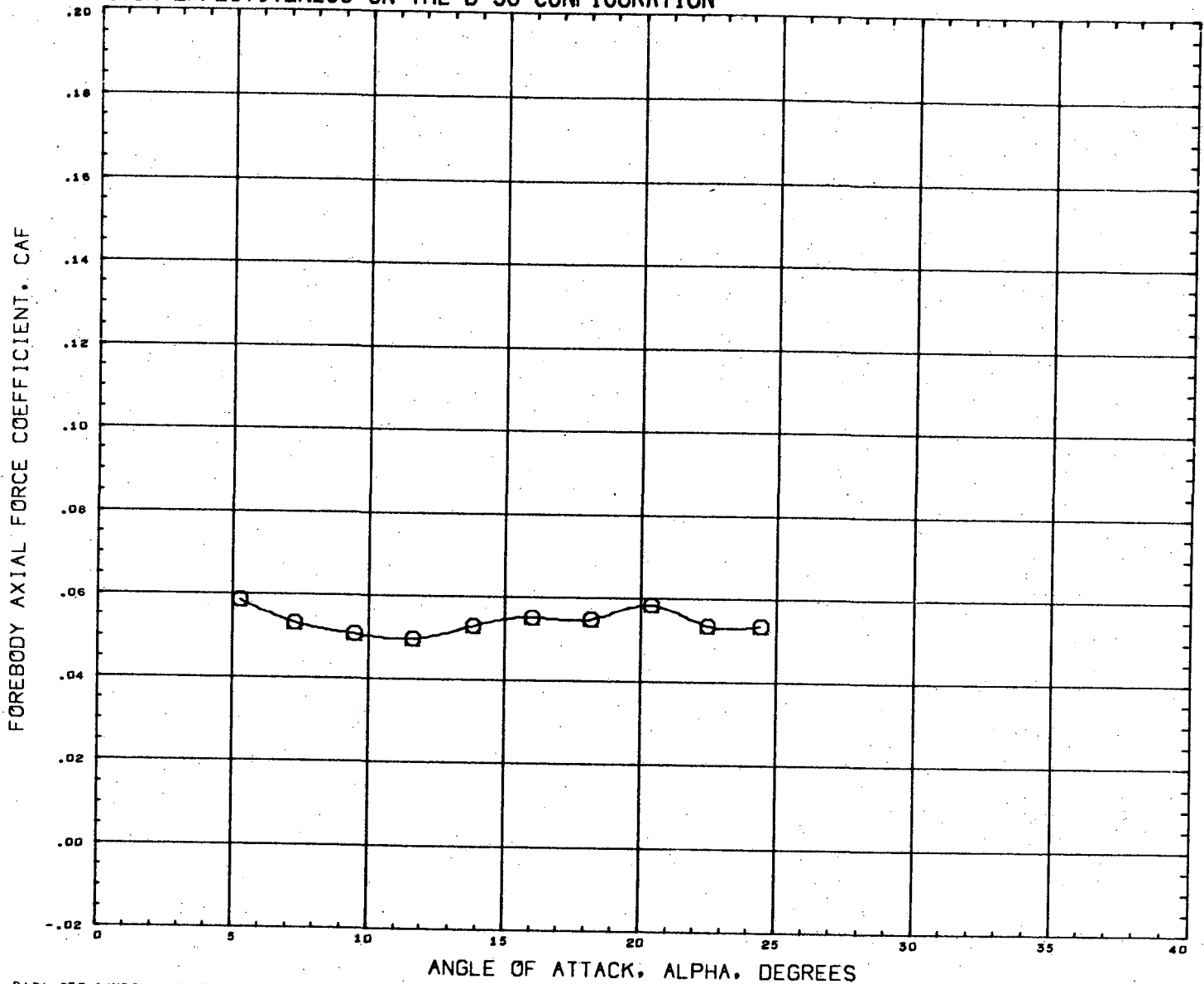
BETA	ELEVON	CANARD	RUDDER
R=0	0.000	10.000	0.000
R=0	0.000	0.000	0.000
R=0	0.000	-10.000	0.000
R=0	0.000	-20.000	0.000

REFERENCE INFORMATION

SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MACH 0.897

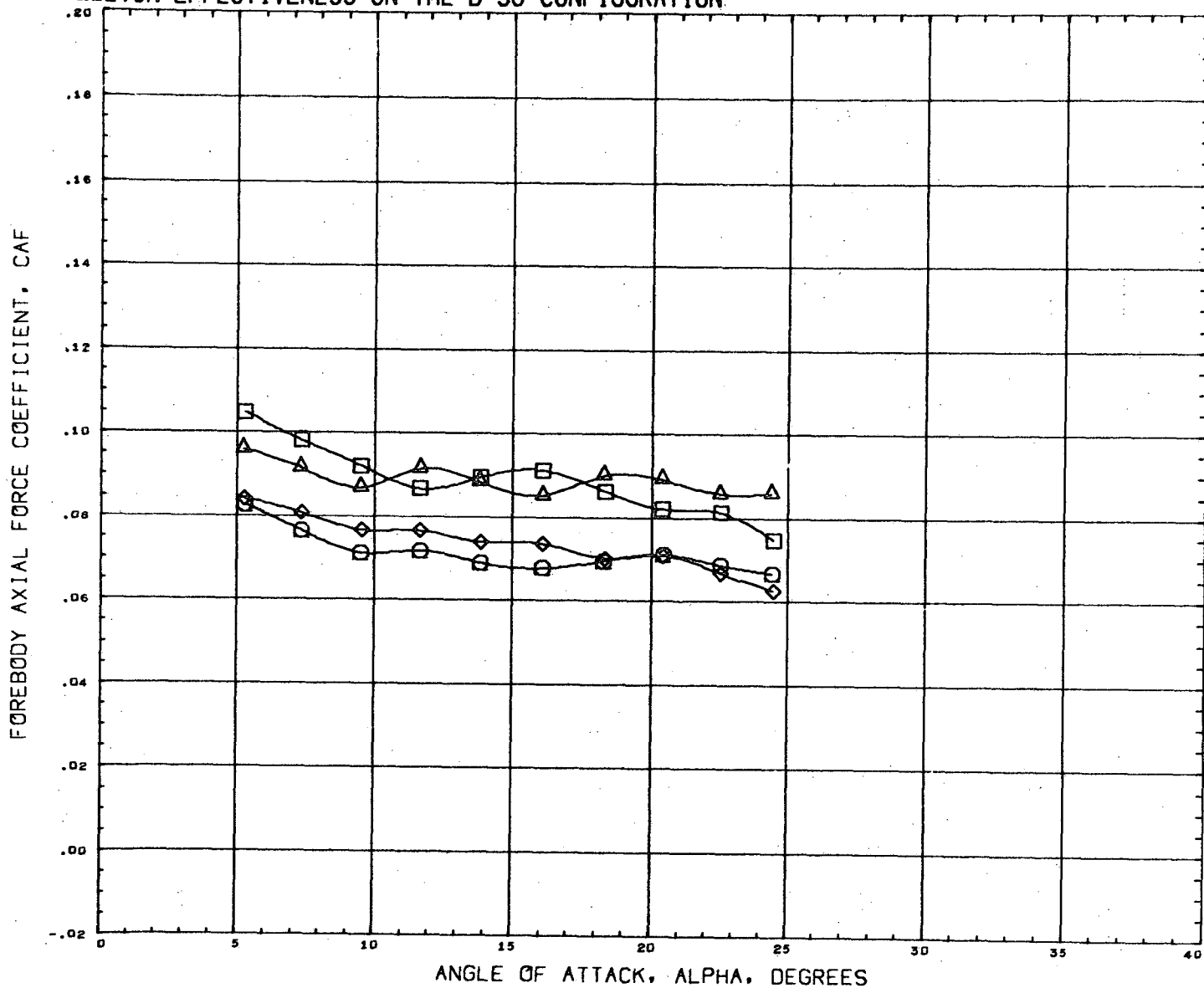
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8VID E=0 C=D R=D	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 0.961

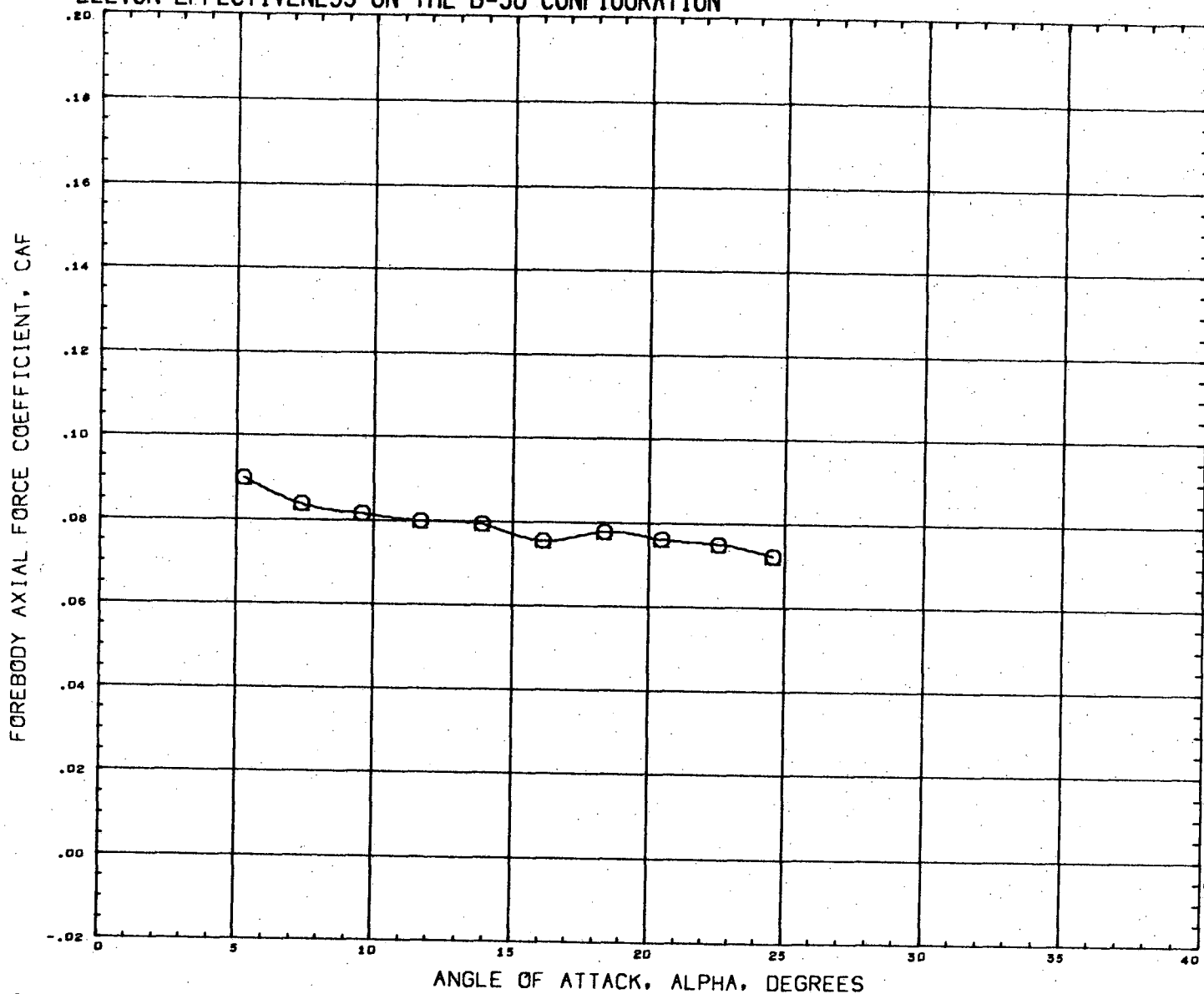
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	MSFC TWT-493 GD/C B25W19C8V1D E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	MSFC TWT-493 GD/C B25W19C8V1D E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V1D E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 0.999

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL CONFIGURATION DESCRIPTION

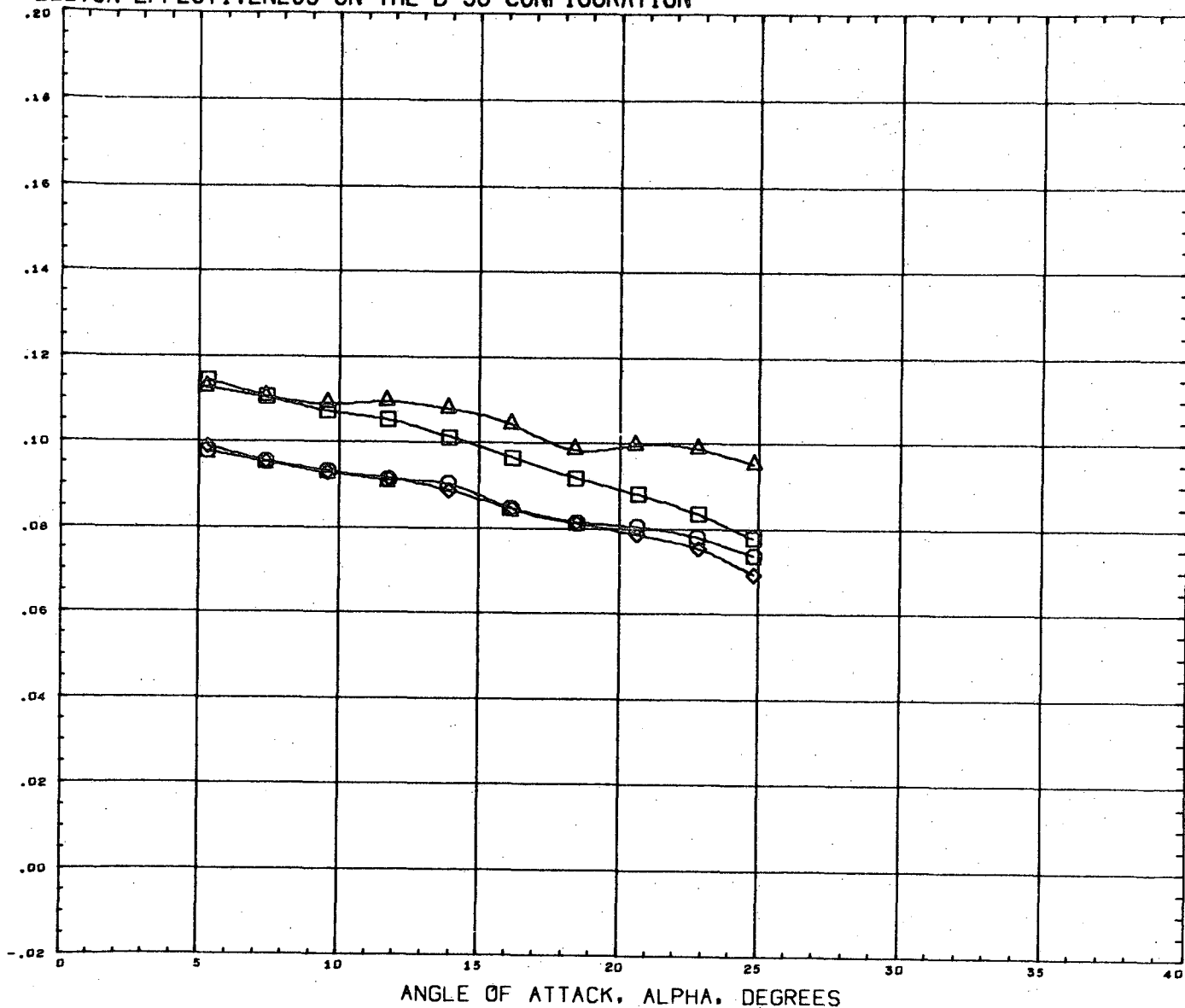
(E35EAA) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35EAO) MSFC TWT-493 GD/C B25W19C8VID E=0 C=D R=0
 (E35EAC) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35EAB) DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
0.000	0.000	0.000	0.000	LREF	3.0120 IN.
0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
0.000	-20.000	0.000	0.000	XMRF	7.2990 IN.
				YMRF	0.0000 IN.
				ZMRF	0.0000 IN.
				SCALE	0.0035

MACH 1.043

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

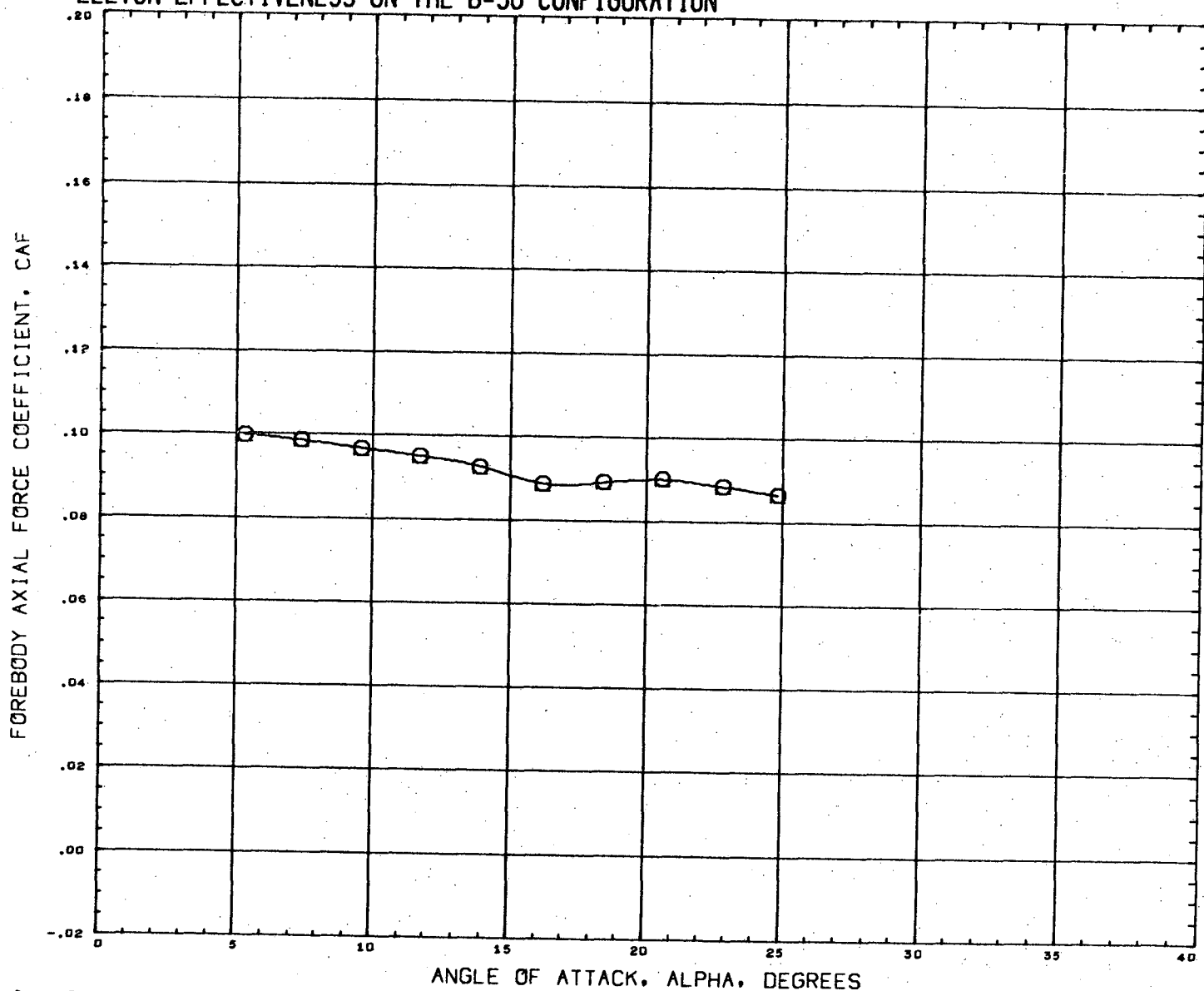
FOREBODY AXIAL FORCE COEFFICIENT, CAF



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	×	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF	6.0160 IN.
(E35EAB)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
							YMRP	0.0000 IN.
							ZMRP	0.0000 IN.
							SCALE	0.0035

MACH 1.195

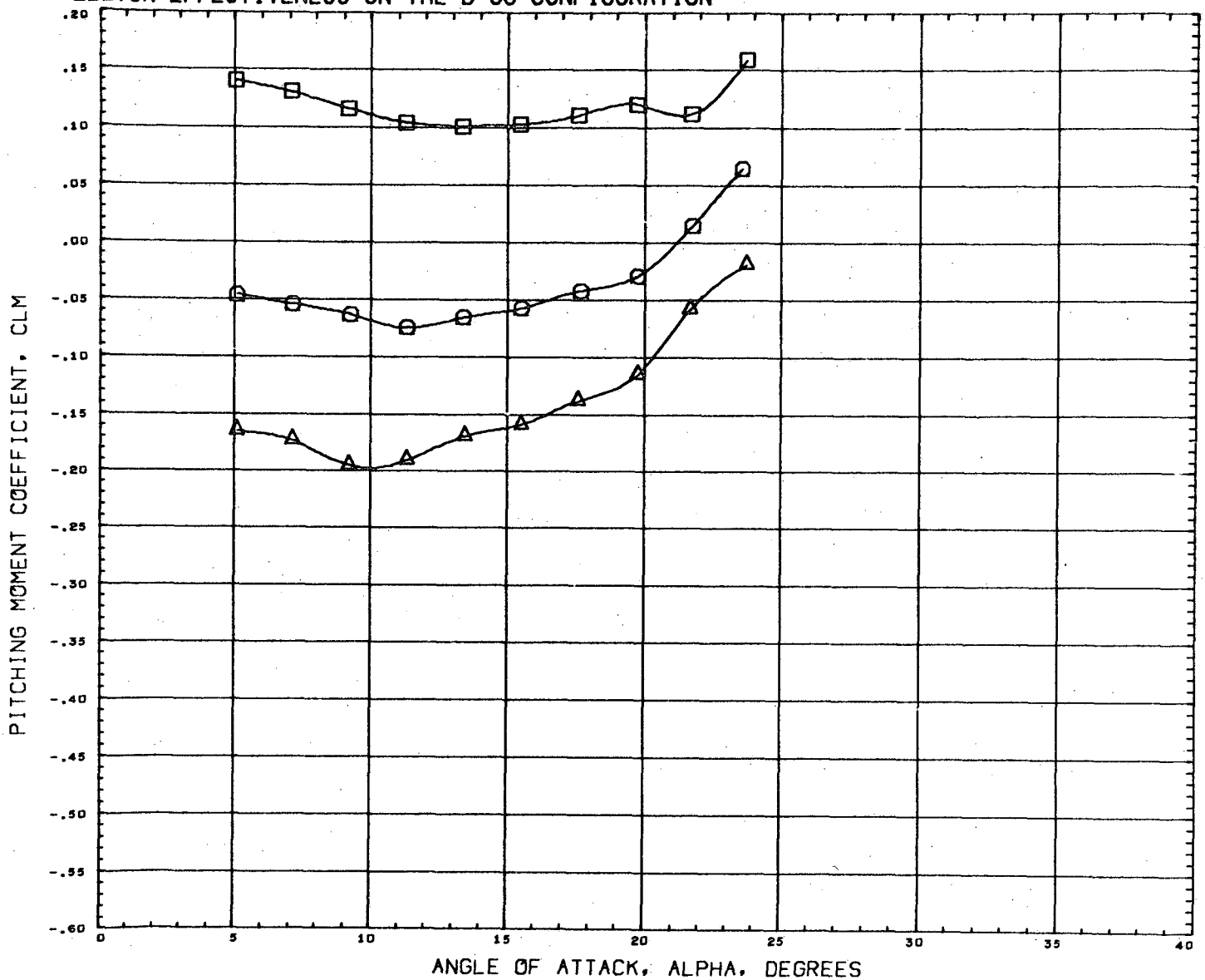
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V1D E=D	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.453

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

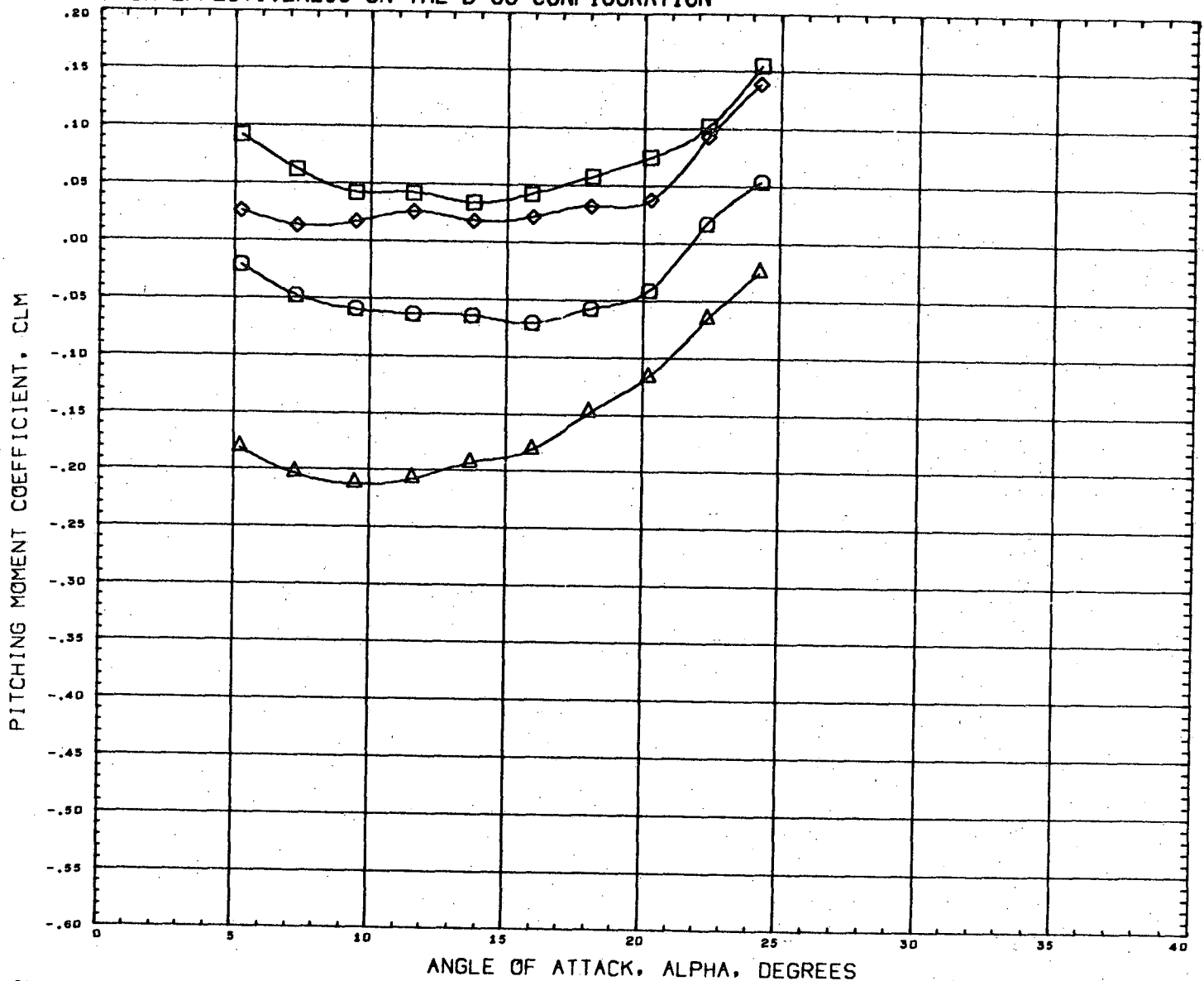


DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=D R=0	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=D R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	×	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=D R=0	0.000	-20.000	0.000	0.000	XMRF	7.2990 IN.
							YMRF	0.0000 IN.
							ZMRF	0.0000 IN.
							SCALE	0.0035

MACH D.594

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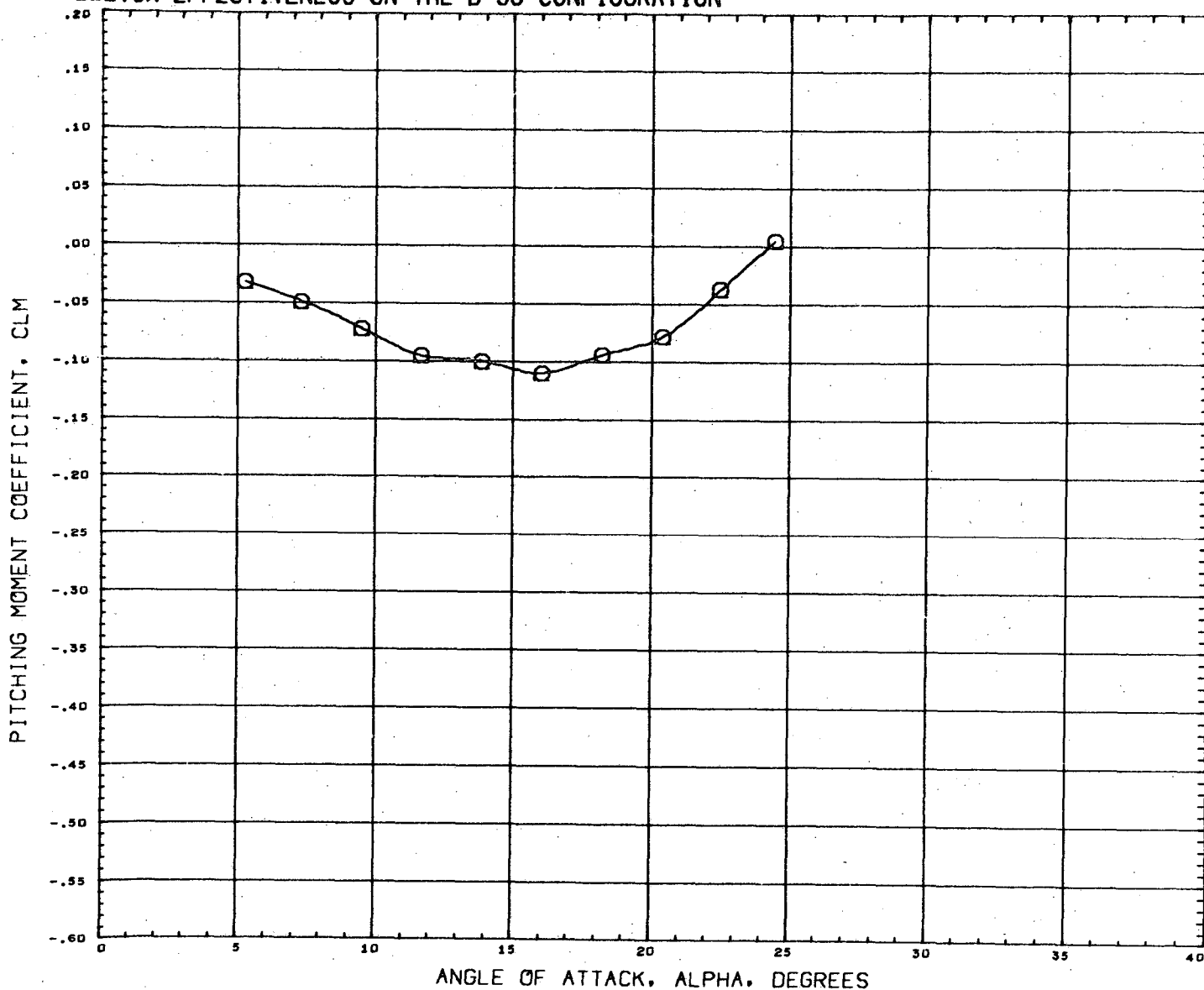
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 sq. in.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 in.
(E35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 in.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRF 7.2990 in.
						YMRP 0.0000 in.
						ZMRP 0.0000 in.
						SCALE 0.0035

MACH 0.897

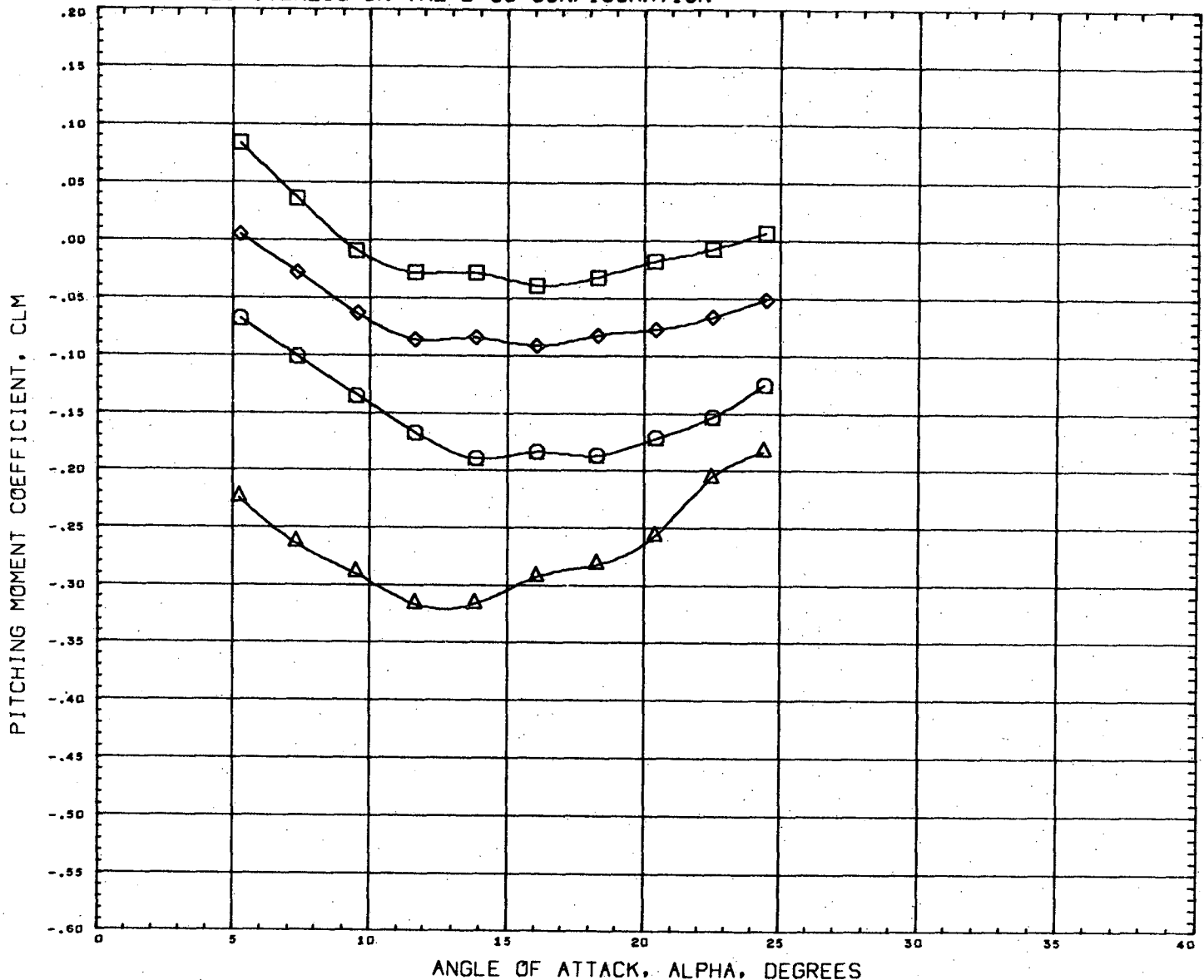
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF	6.0160 IN.
(E35EAB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 0.961

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



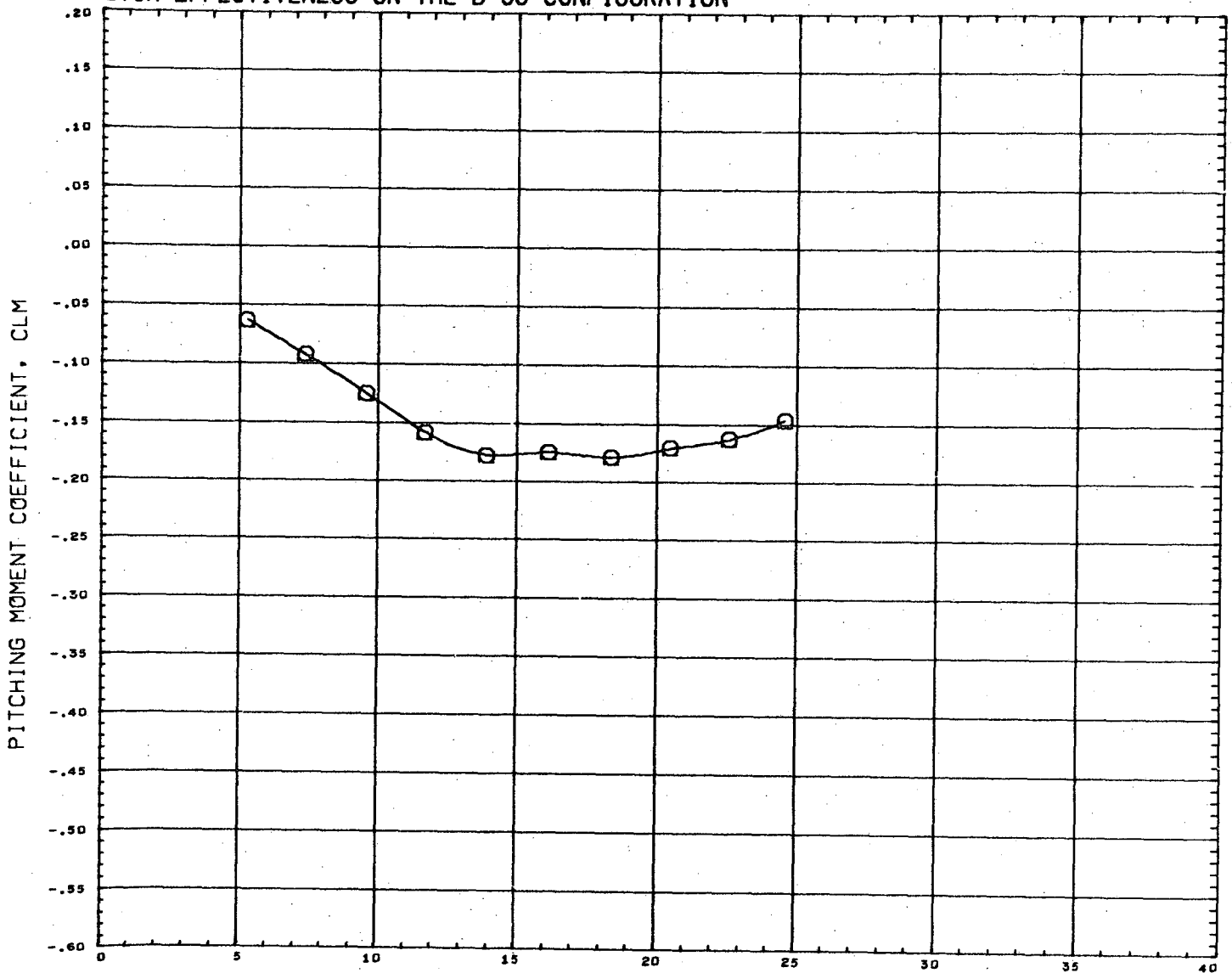
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=D R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35EAO)	◇	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=D R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=D R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	○	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=D R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
							YMRP 0.0000 IN.
							ZMRP 9.0000 IN.
							SCALE 0.0035

MACH 0.999

PAGE 32

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ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

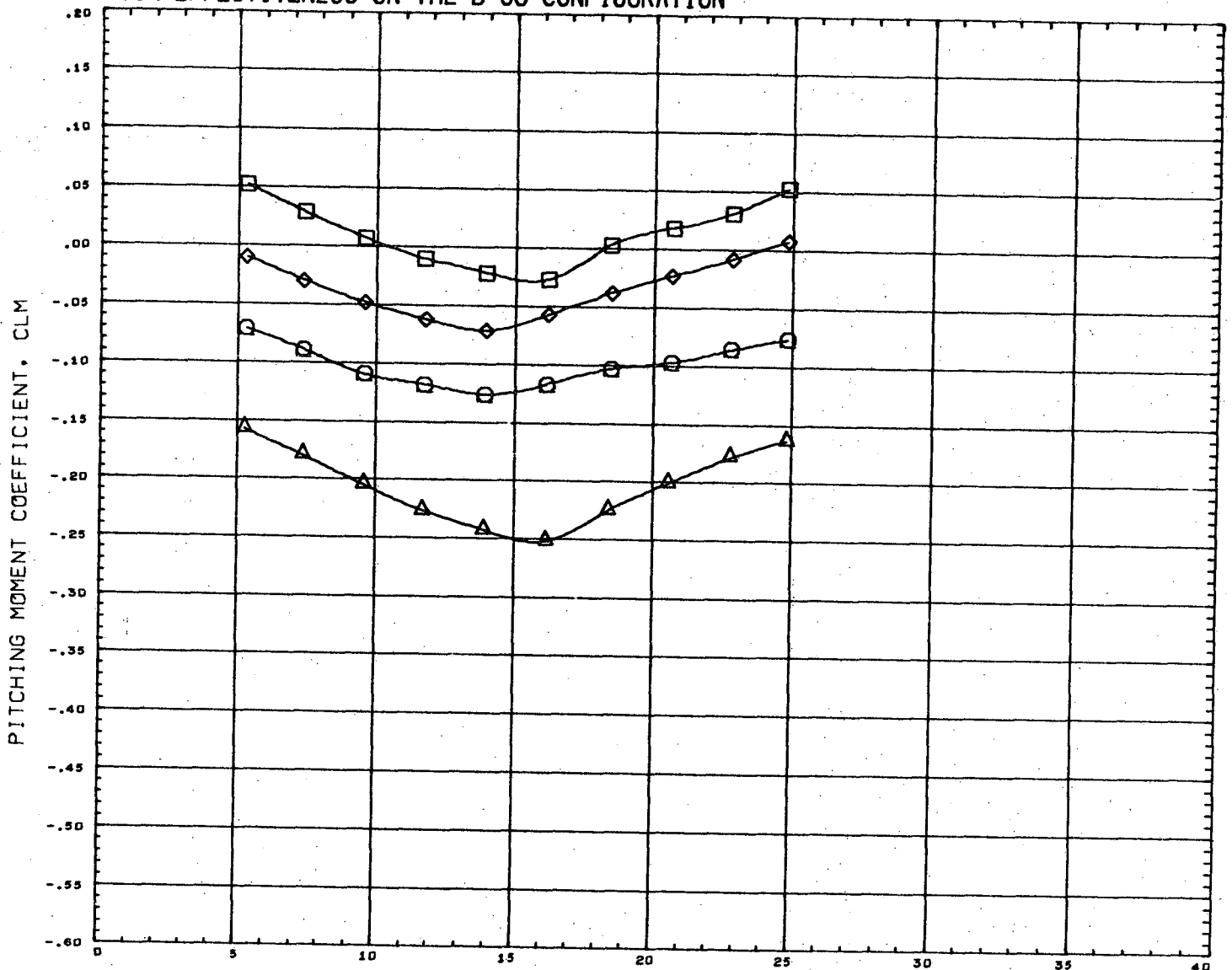


ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-20.000	0.000	0.000	XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 1.043

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

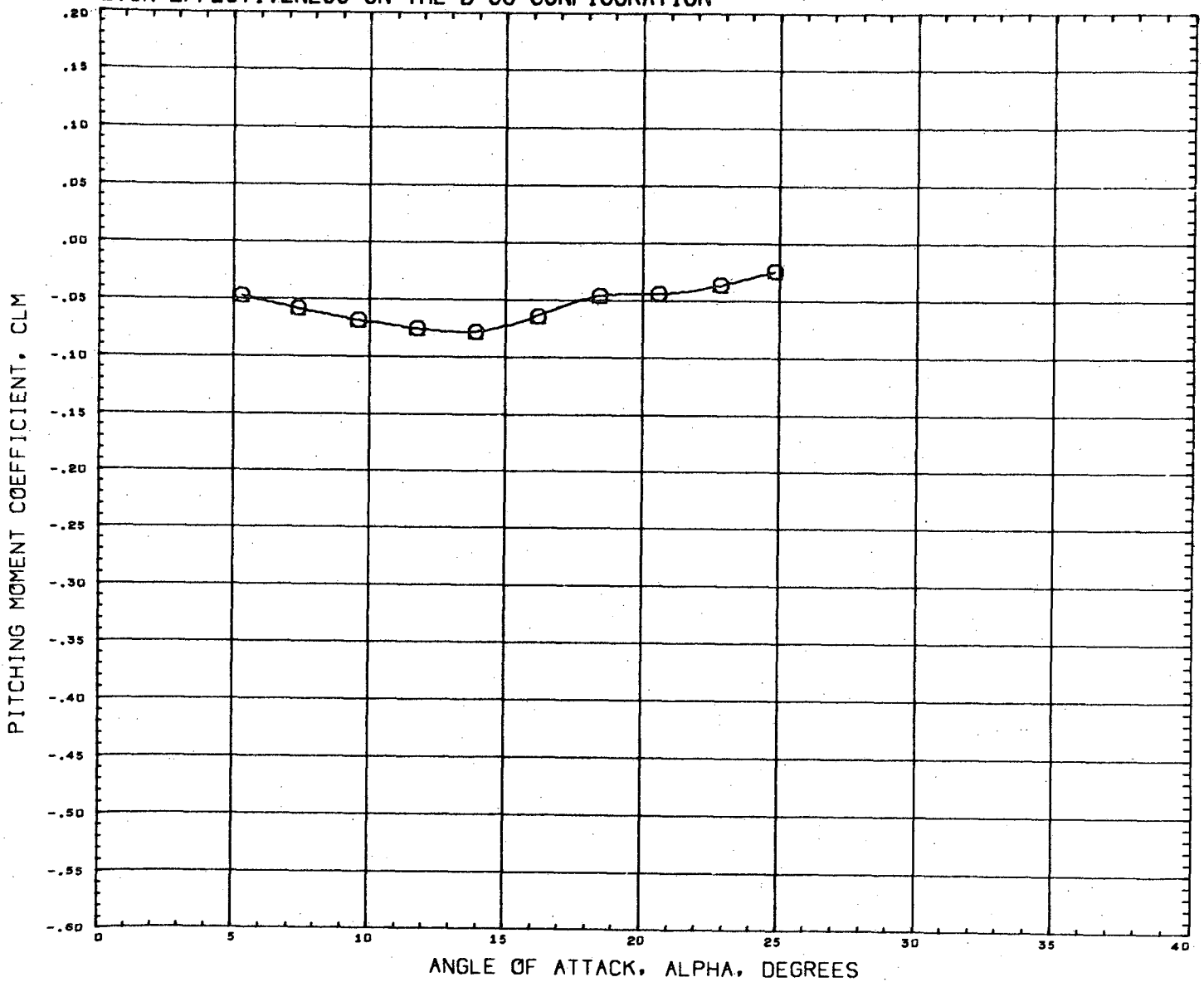


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.195

ORIGINAL PAGE IS
OF POOR QUALITY

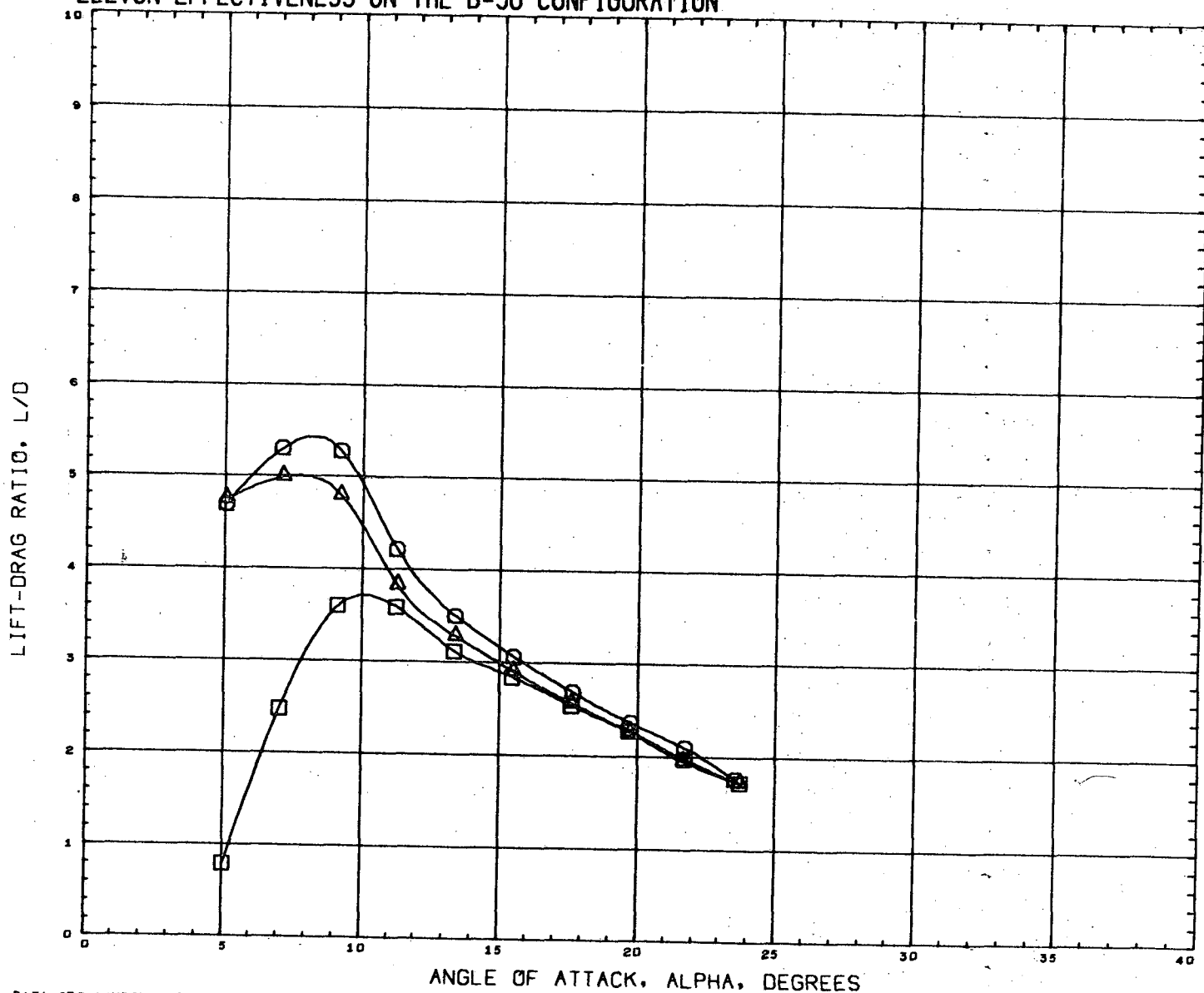
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	△	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	⊗	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	□	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
							YMRP	0.0000 IN.
							ZMRP	0.0000 IN.
							SCALE	0.0035

MACH 1.453

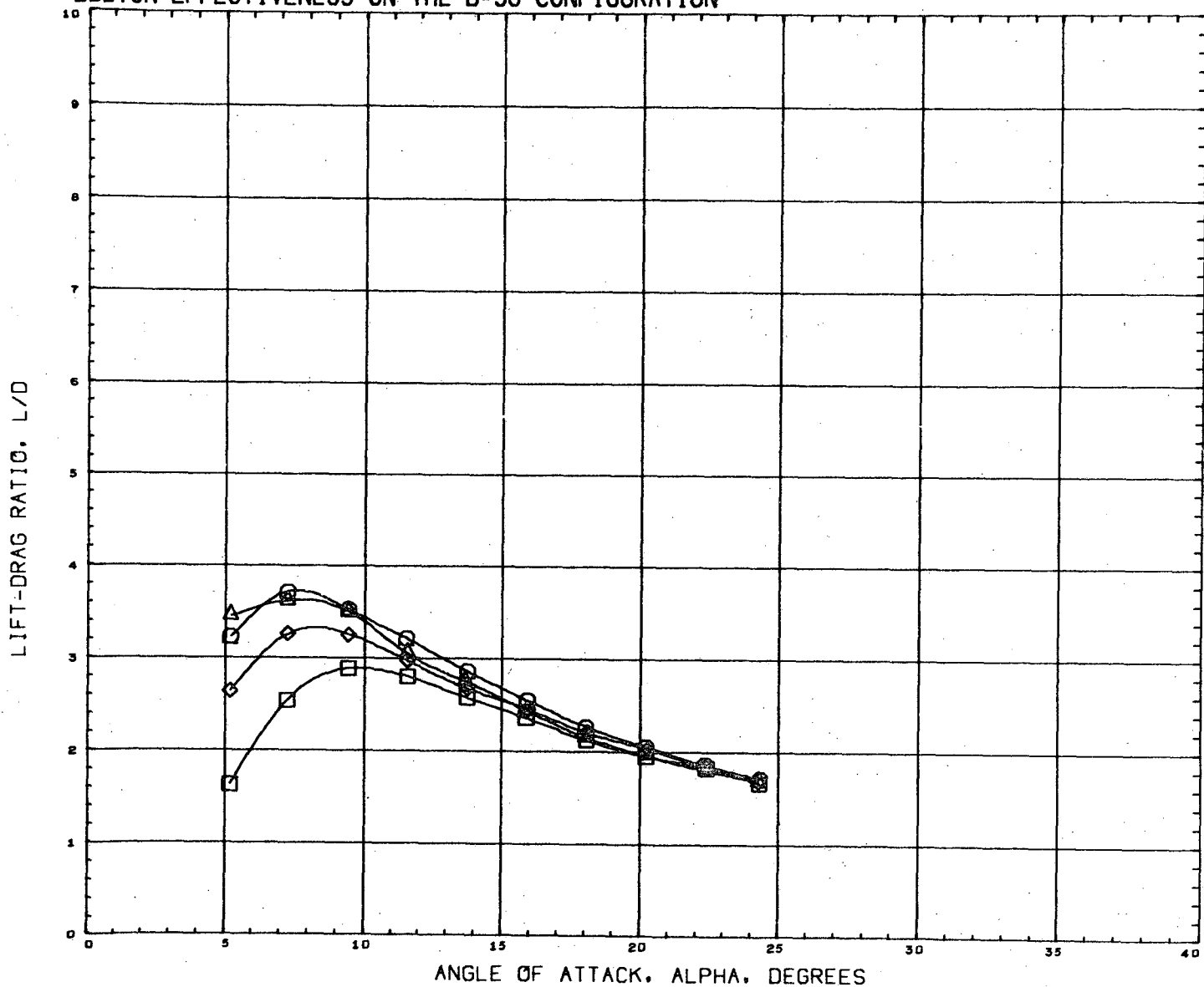
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=D R=D	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=D R=D	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=D R=D	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 0.594

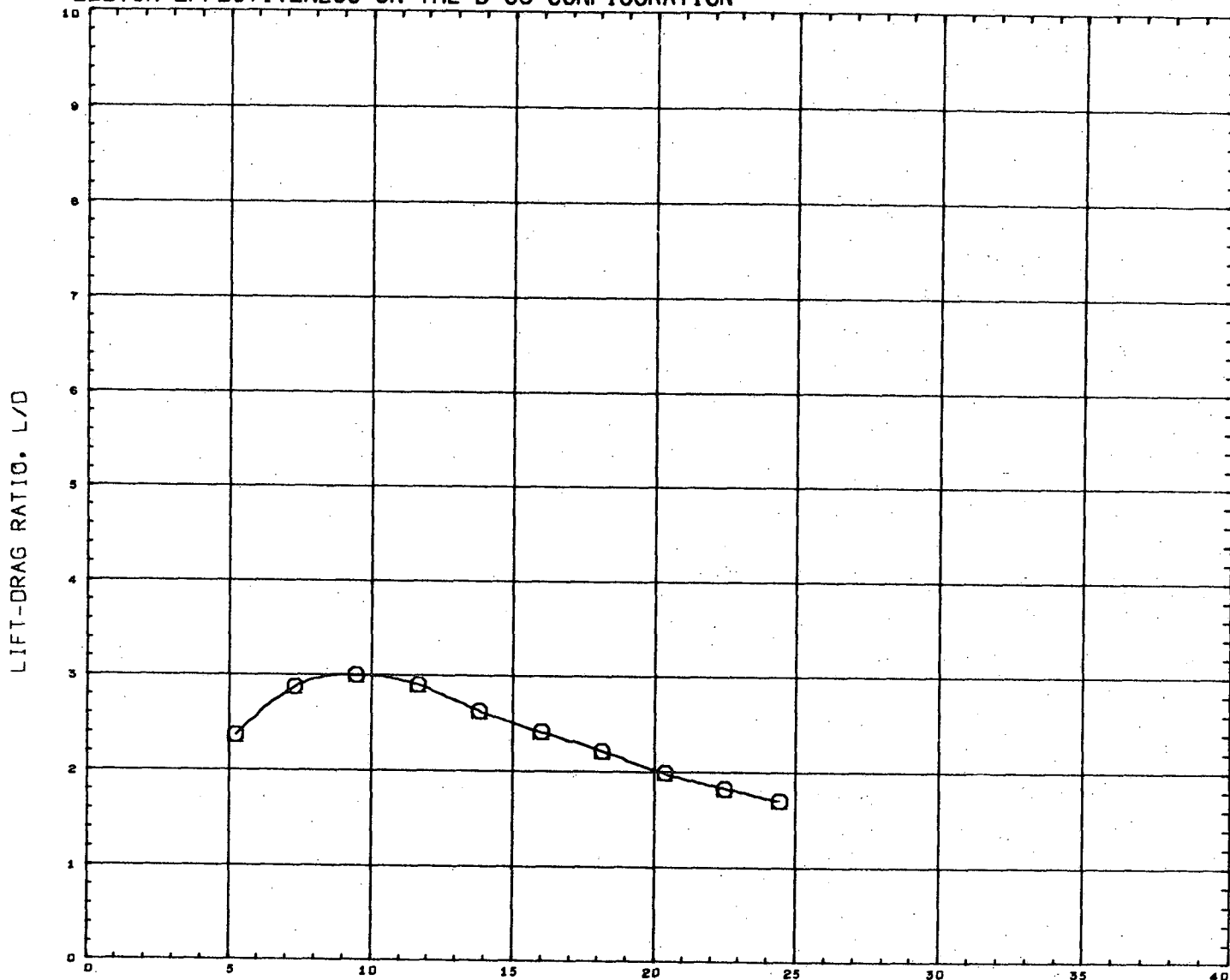
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 0.897

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



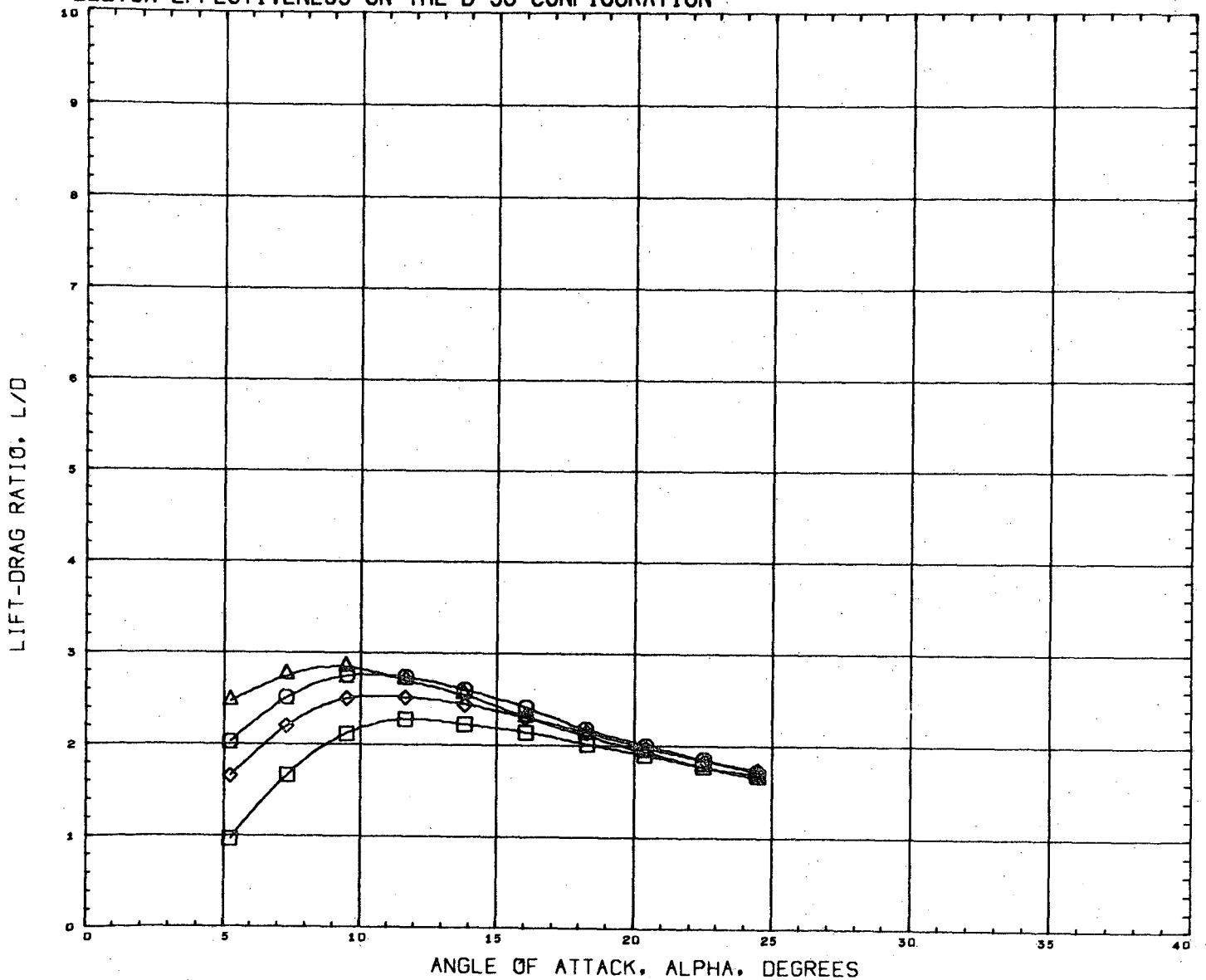
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E35EAA) \triangle DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35EAO) \circ MSFC TWT-493 GD/C 825W19C8V10 E=0 C=D R=D
 (E35EAC) \times DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35EAB) \square DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION		
0.000	10.000	0.000	0.000	SREF	14.9040	SQ. IN.
0.000	0.000	0.000	0.000	LREF	3.0120	IN.
0.000	-10.000	0.000	0.000	BREF	6.0180	IN.
0.000	-20.000	0.000	0.050	XMRF	7.2990	IN.
				YMRF	0.0000	IN.
				ZMRF	0.0000	IN.
				SCALE	0.0035	

MACH 0.961

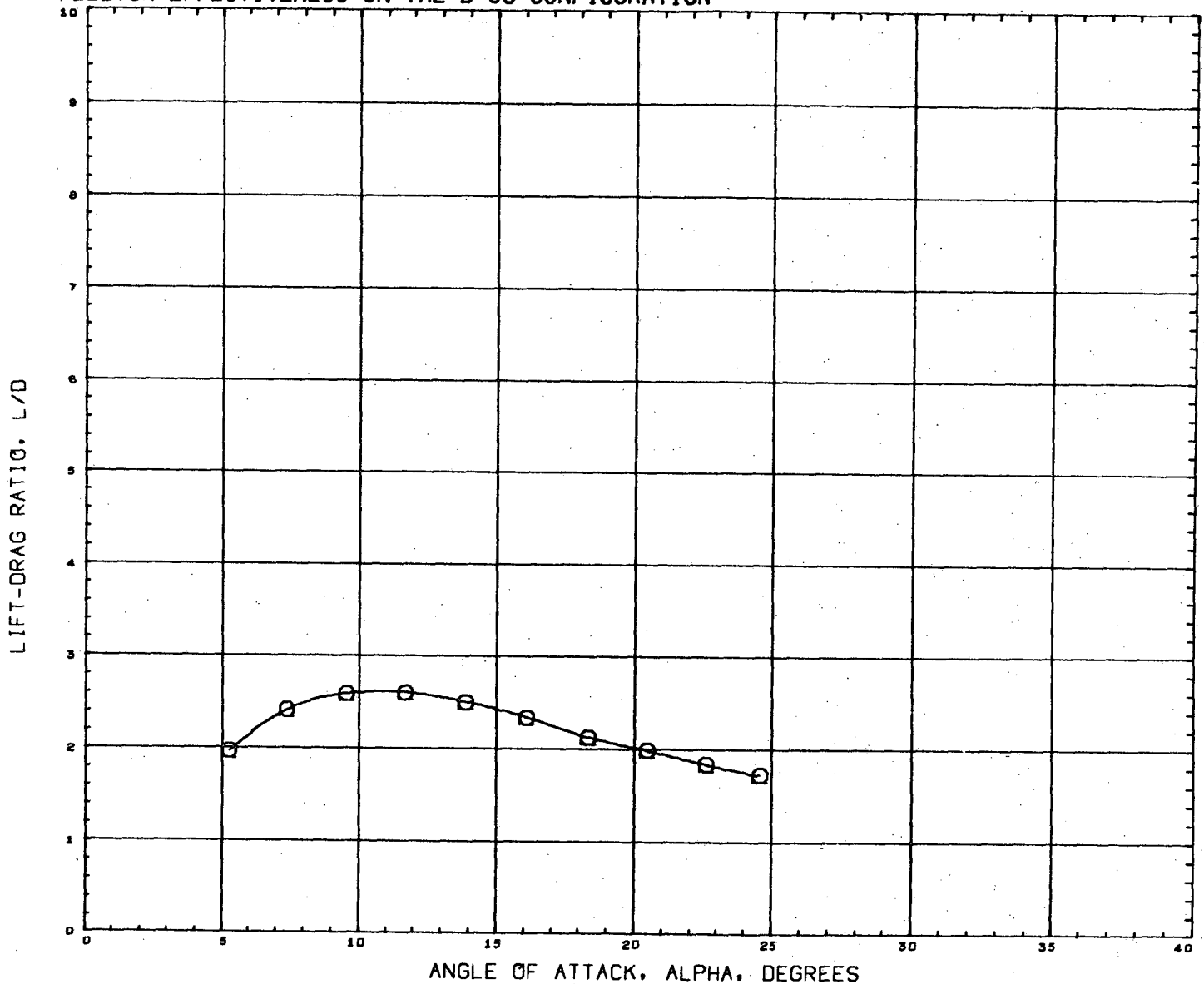
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=D R=D	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=D R=D	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=D R=D	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=D R=D	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 0.999

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

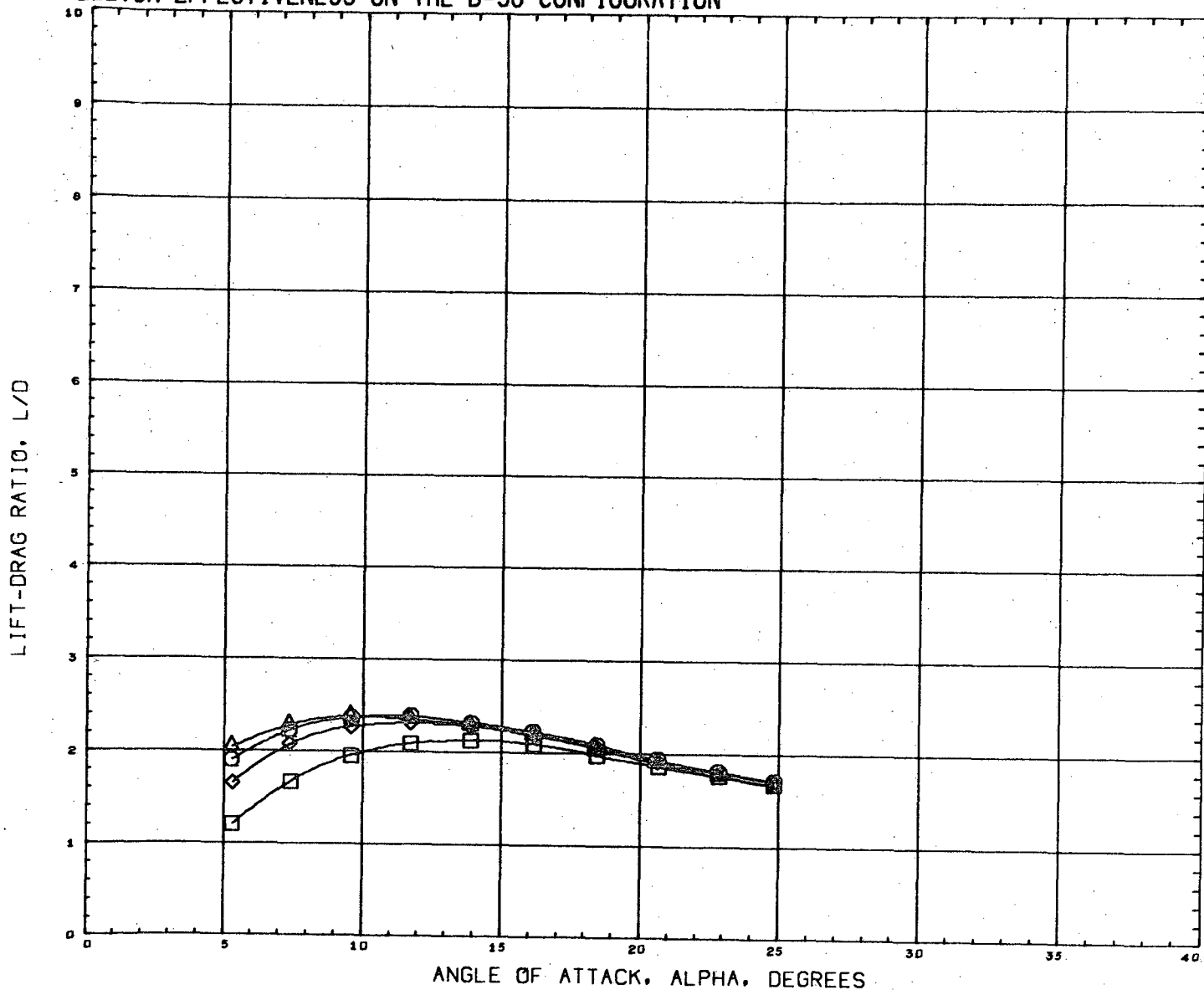


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	10.000	0.000	0.000	SREF	14.9040 80. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=D C=D R=D	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-20.000	0.000	0.000	XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 1.043

ORIGINAL PAGE IS
OF POOR QUALITY

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

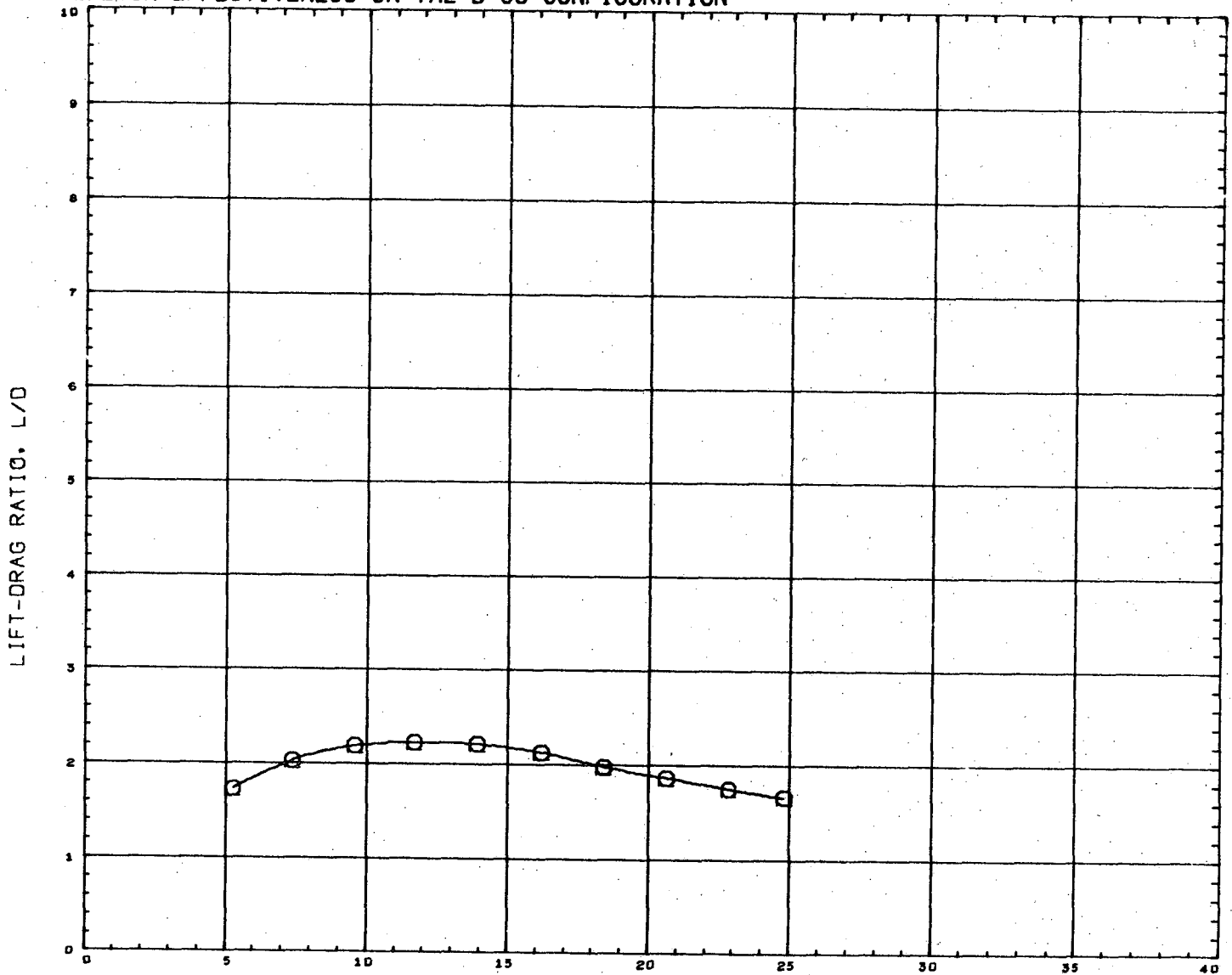


DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35EAO)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	◇	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0035

MACH 1.195

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OF POOR QUALITY

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL CONFIGURATION DESCRIPTION

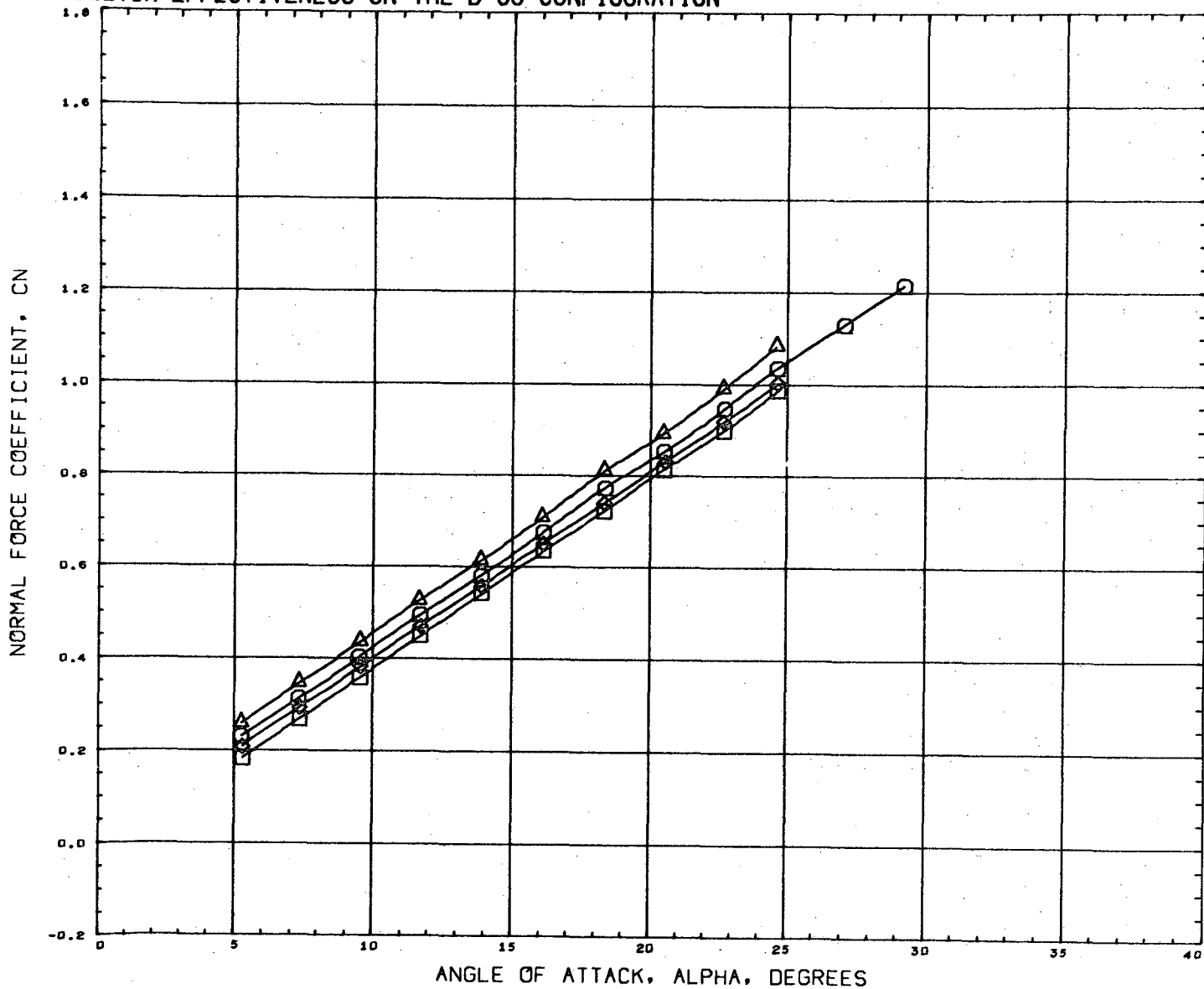
(E35EAA) Δ DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35EAO) \circ MSFC TW1-493 GD/C B25W19C8V10 E=0 C=D R=D
 (E35EAC) \otimes DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35EAB) \square DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA	ELEVON	CANARD	RUDDER
0.000	10.000	0.000	0.000
0.000	0.000	0.000	0.000
0.000	-10.000	0.000	0.000
0.000	-20.000	0.000	0.000

REFERENCE INFORMATION		
SREF	14.9040	59 IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MACH 1.453

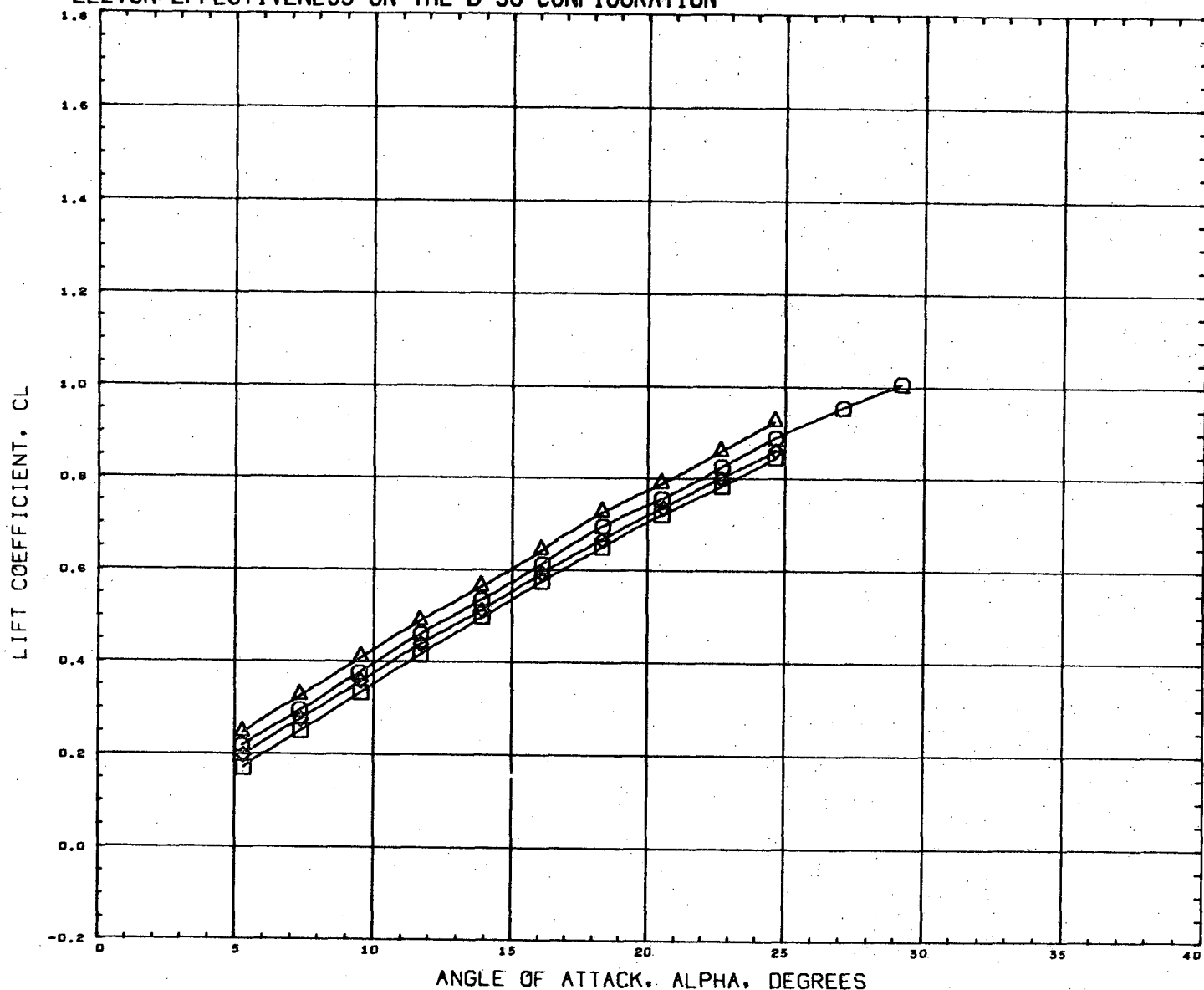
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(F35EAA)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35ECA)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(F35EAC)	◇	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(F35EAB)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0035

MACH 1.955

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

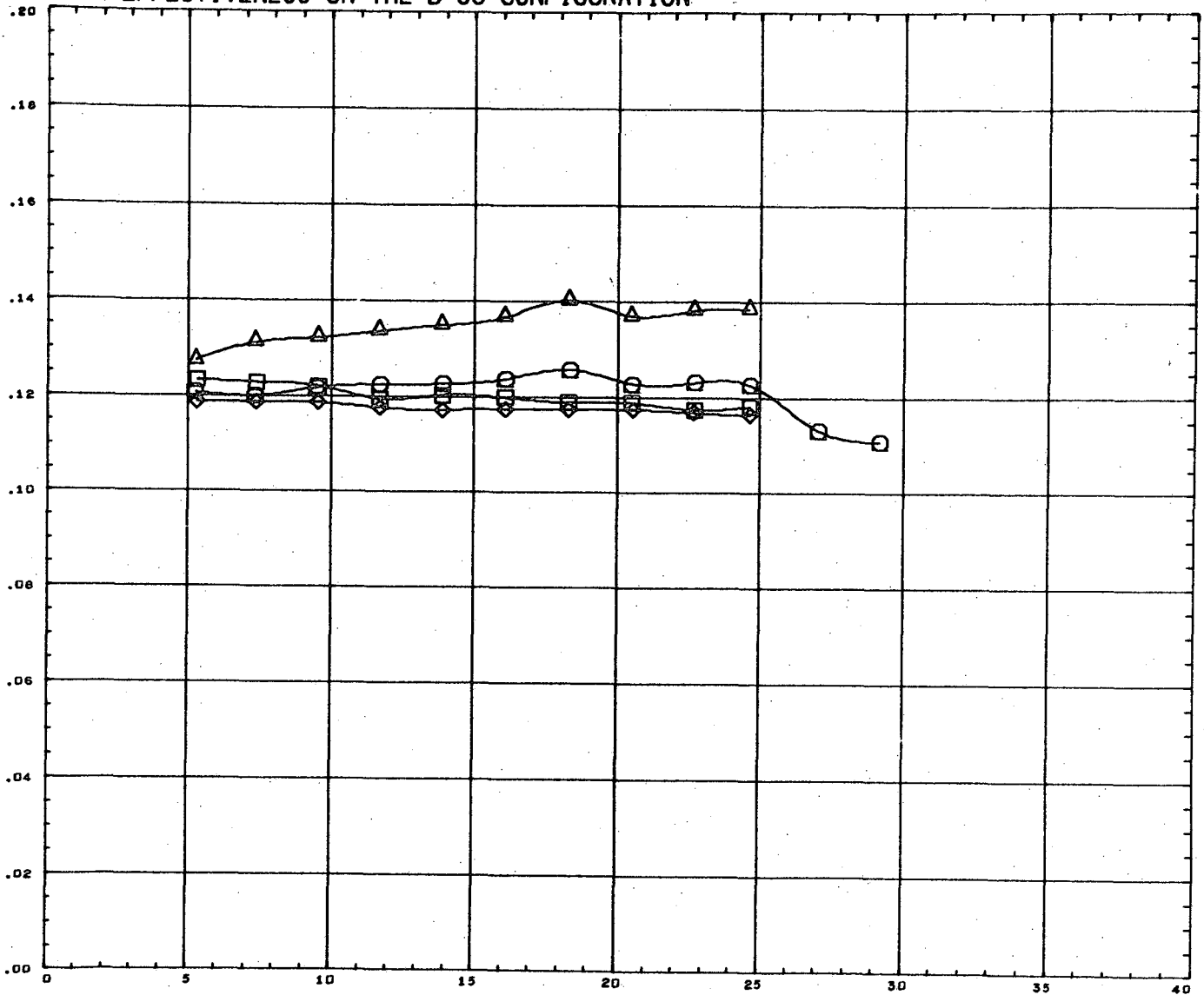


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(F35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35ECA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(F35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(F35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.955

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

AXIAL FORCE COEFFICIENT, C_A



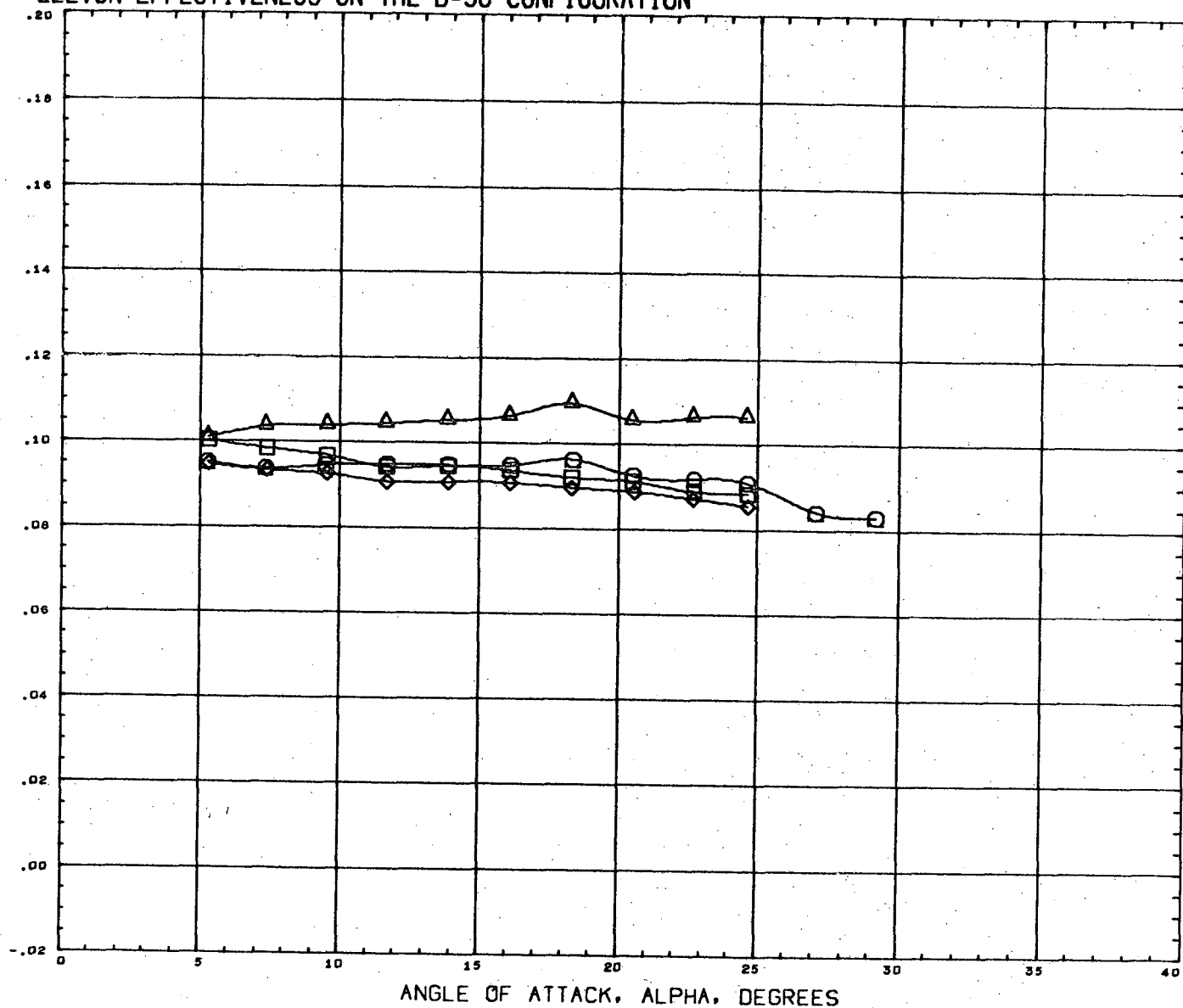
ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(F35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=D R=D	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35ECA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=D R=D	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(F35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=D R=D	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(F35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=D R=D	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.955

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

FOREBODY AXIAL FORCE COEFFICIENT, CAF



ANGLE OF ATTACK, ALPHA, DEGREES

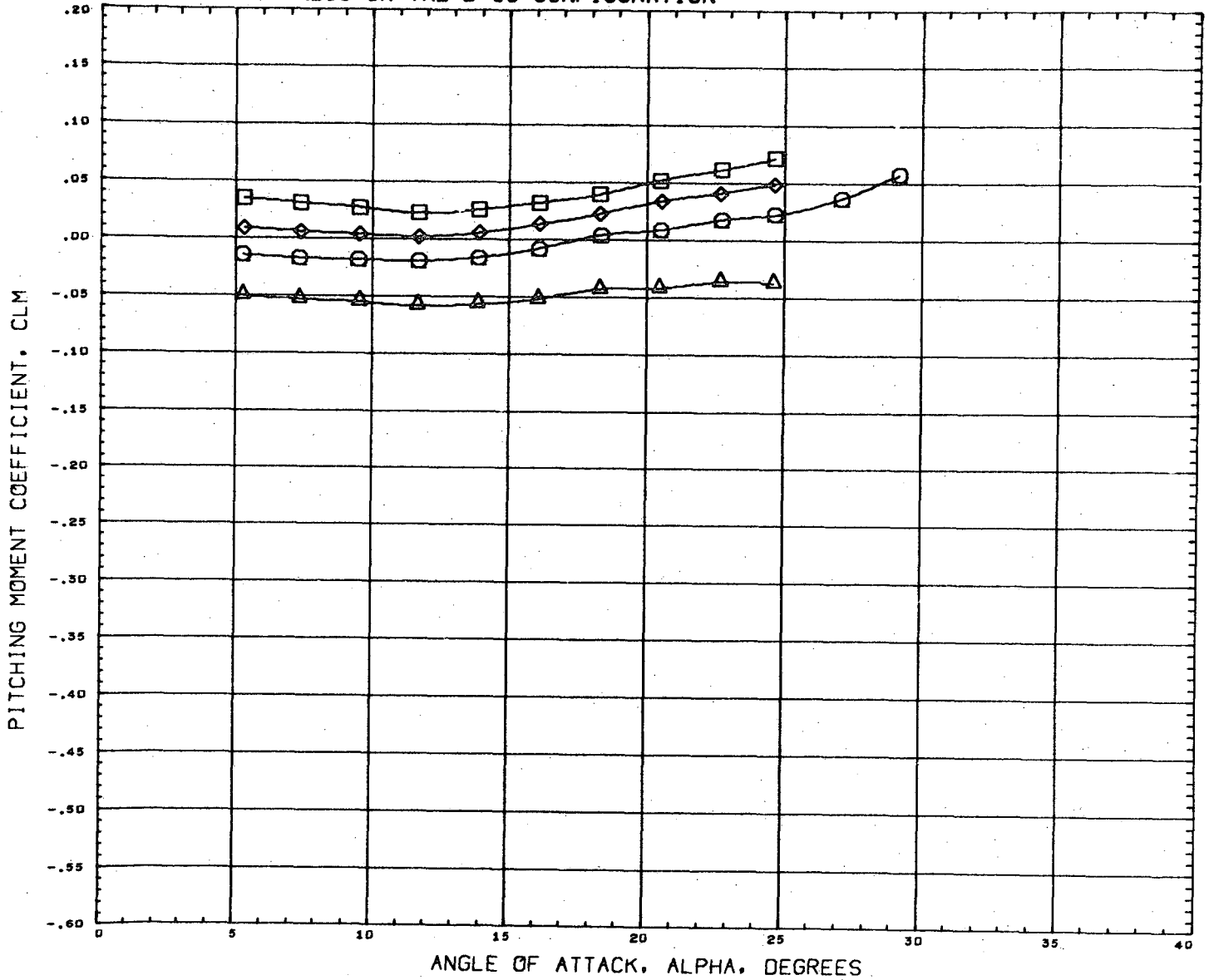
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(F35EAA)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ.IN.
(E35ECA)	□	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(F35EAC)	◇	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(F35EAB)	○	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0035

MACH 1.955

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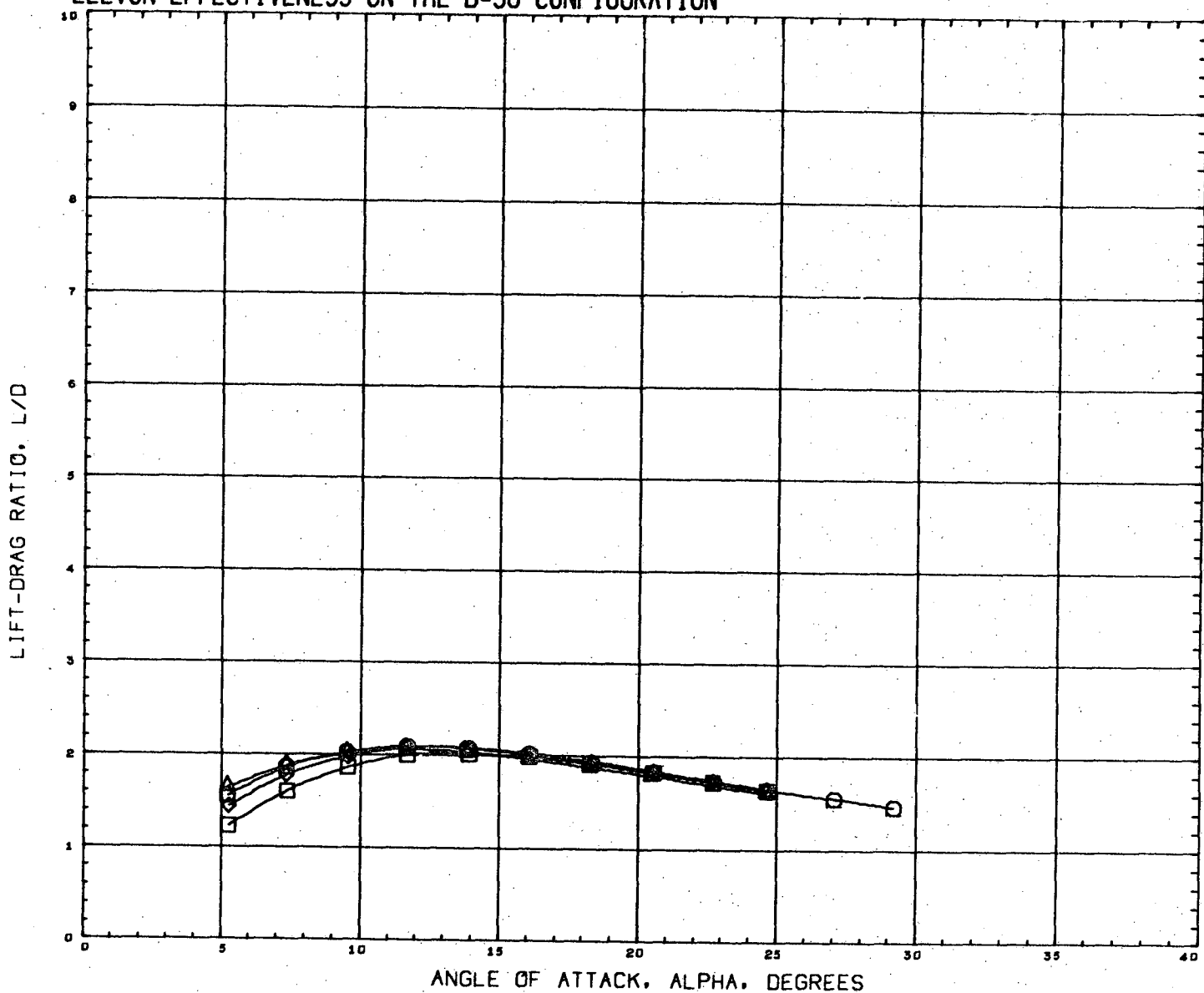
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(F35EAA)	▲	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35ECA)	◆	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(F35EAC)	○	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(F35EAB)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0035

MACH 1.955

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



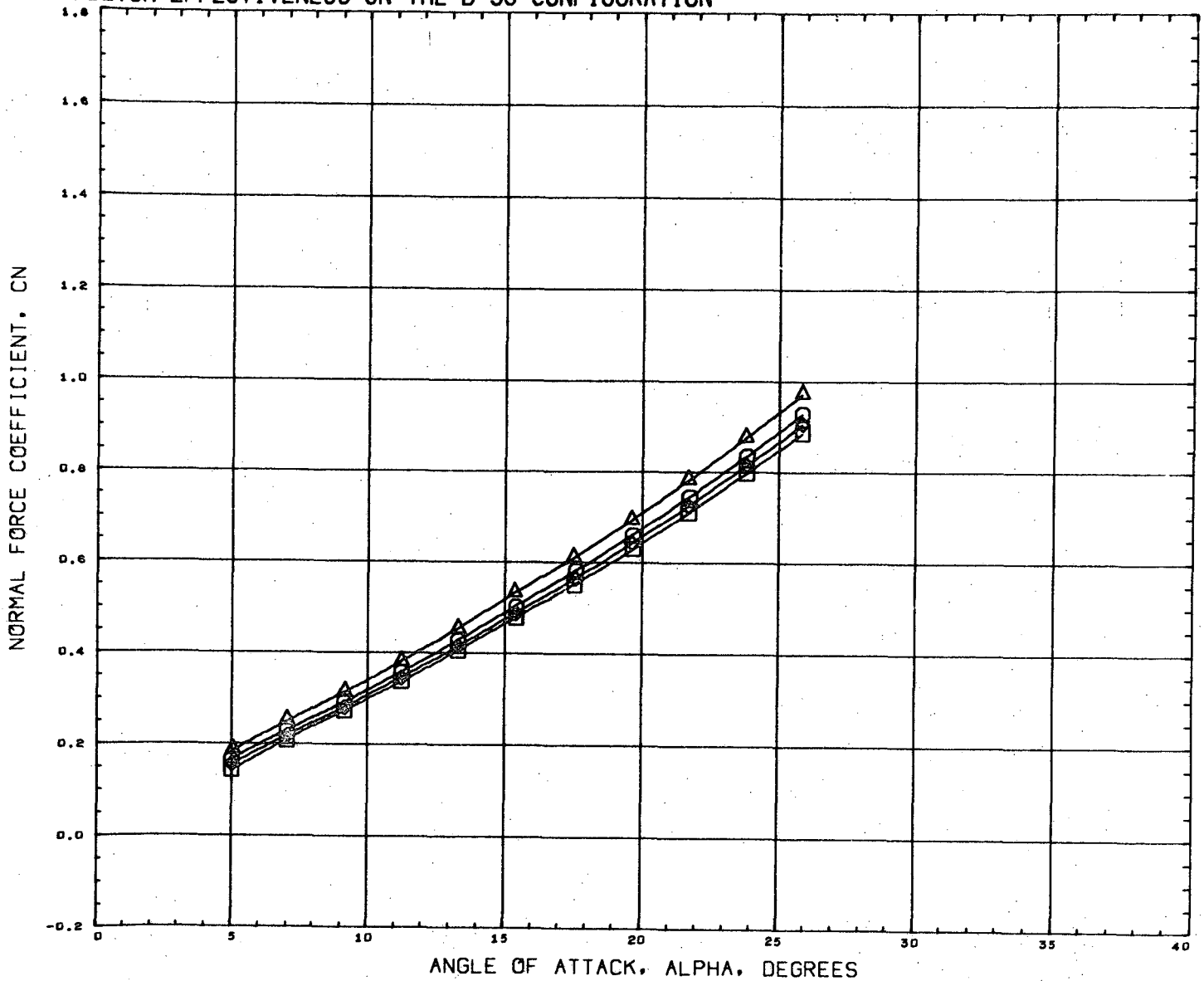
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(F35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=D R=0	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35ECA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=D R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(F35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=D R=0	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(F35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=D R=0	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.955

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OF POOR QUALITY

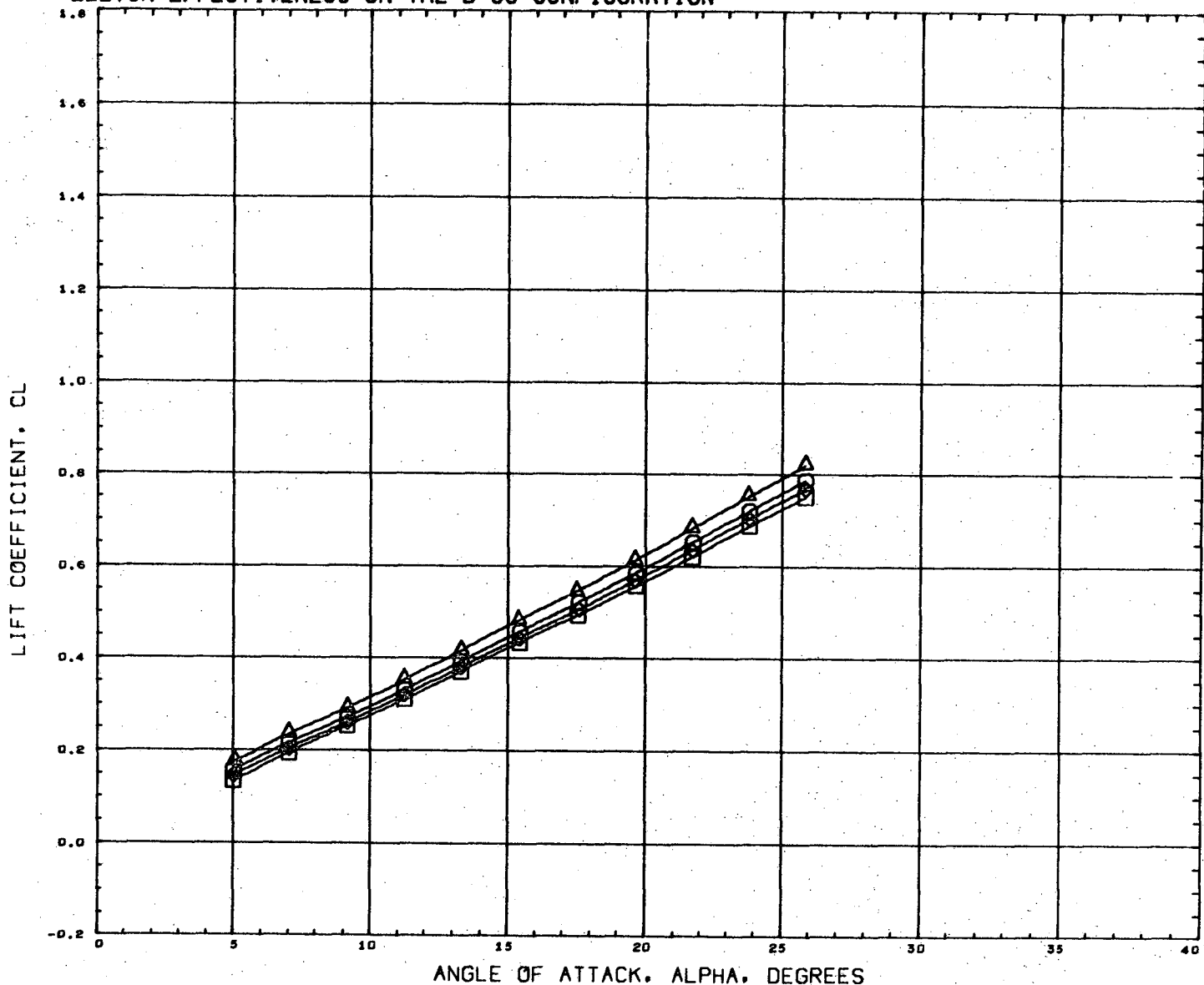
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(G35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(H35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(H35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(G35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 2.740

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

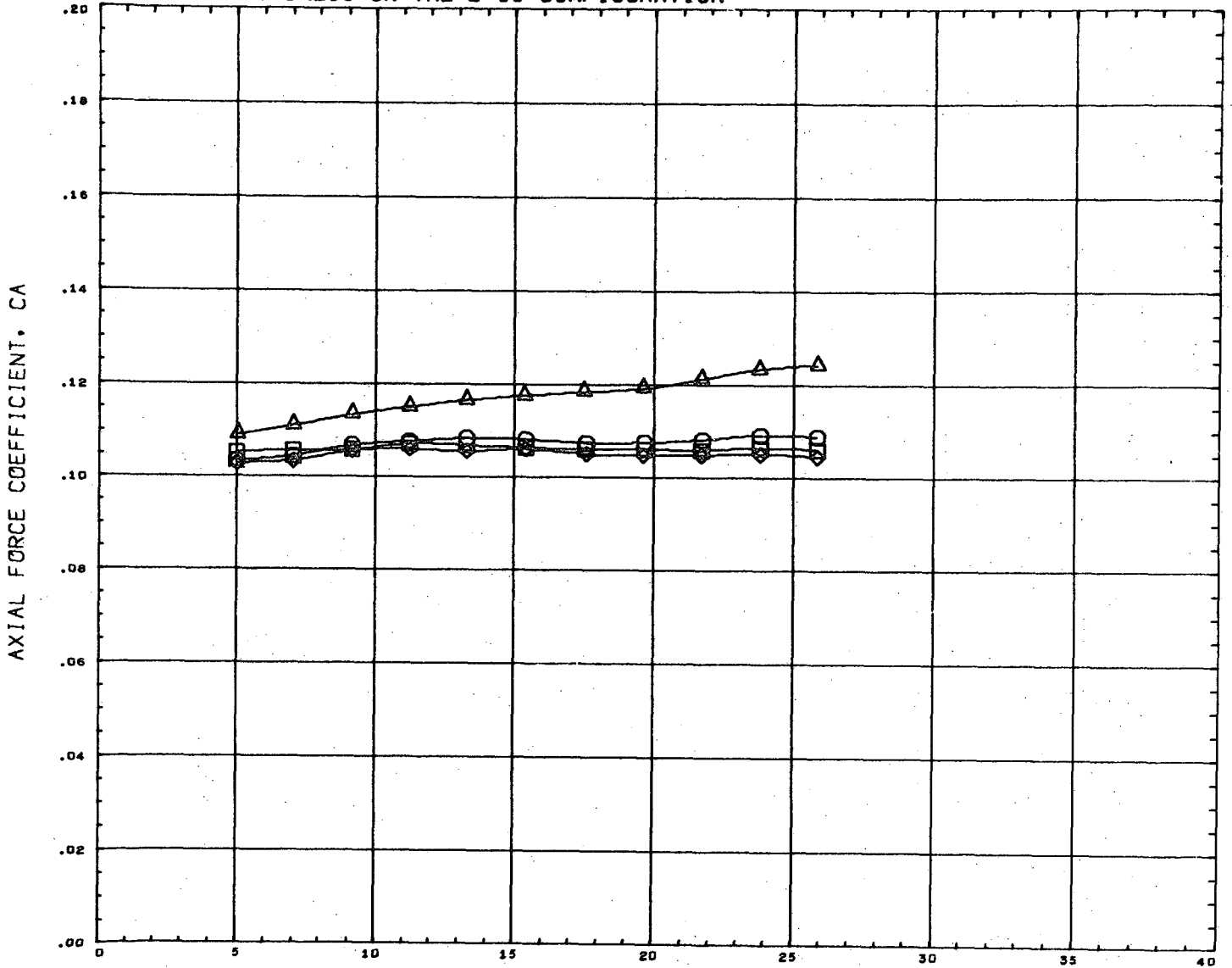


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(G35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(H35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(H35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(G35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	YMRP	7.2990 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 2.740

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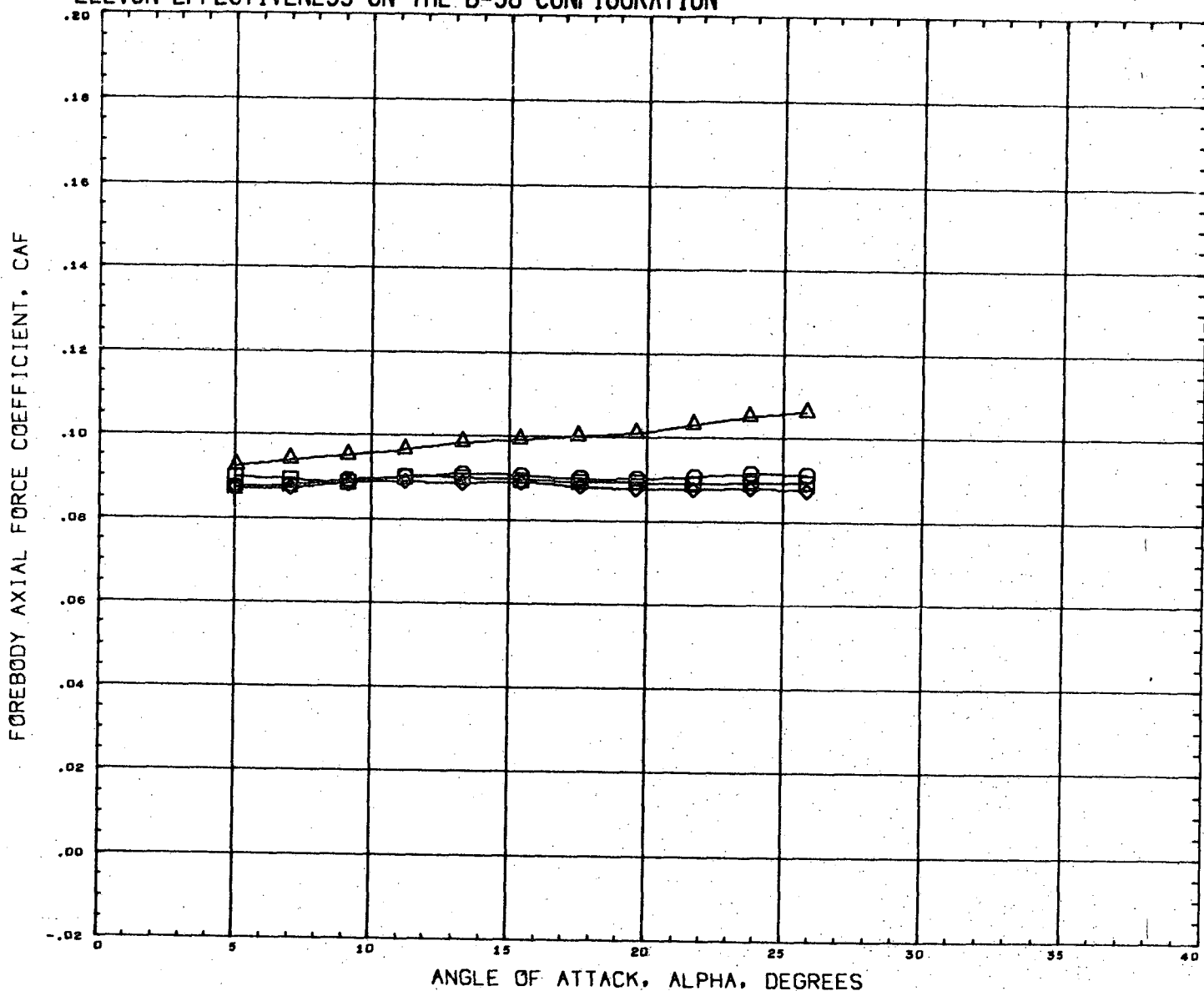
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(G35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ.IN.
(H35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(H35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(G35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 2.740

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

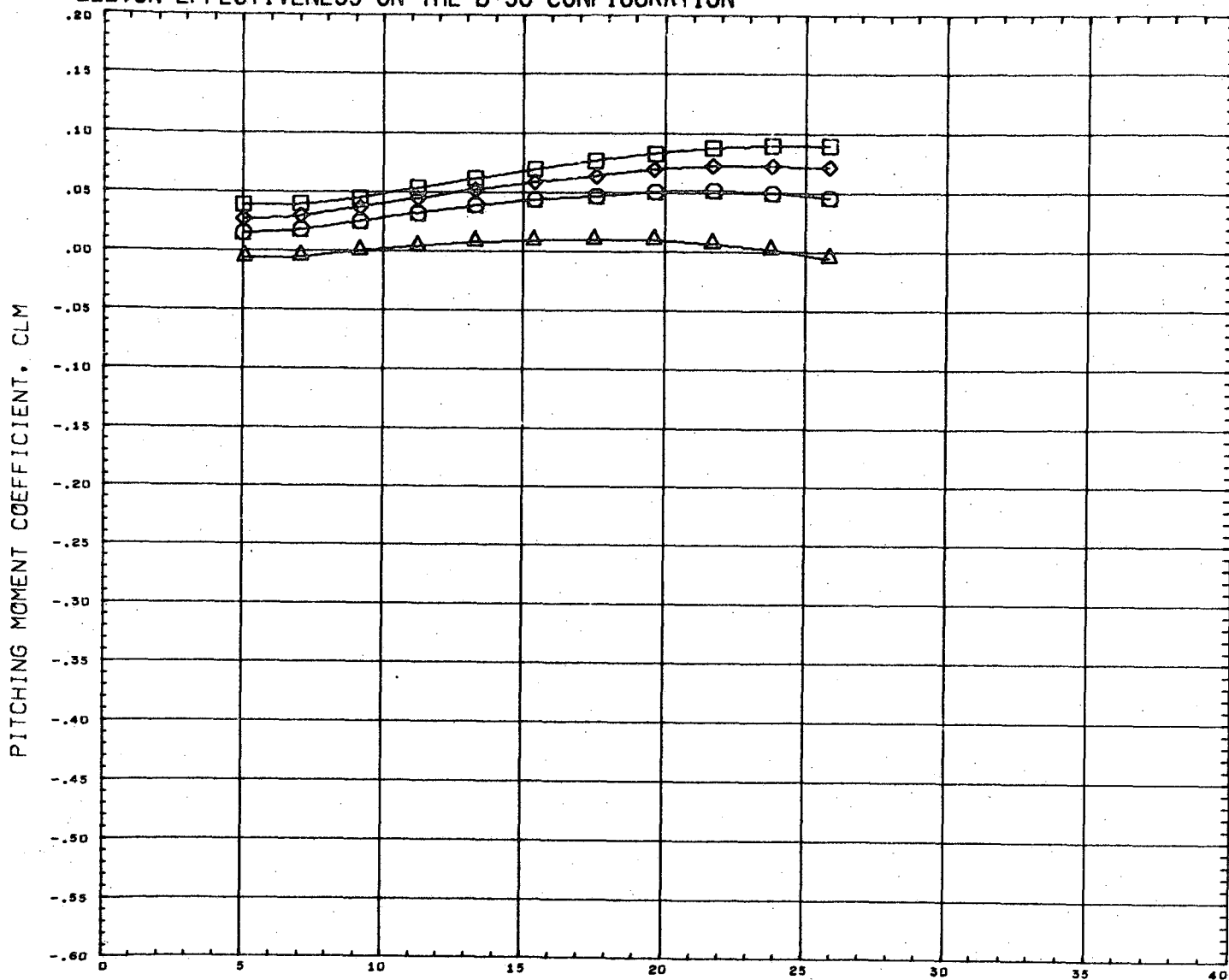


DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(G35EAA)	△	MSFC TWT-493 GD/C 825W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(H35EAO)	□	MSFC TWT-493 GD/C 825W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(H35EAC)	○	MSFC TWT-493 GD/C 825W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(G35EAB)	◇	MSFC TWT-493 GD/C 825W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0035

MACH 2.740

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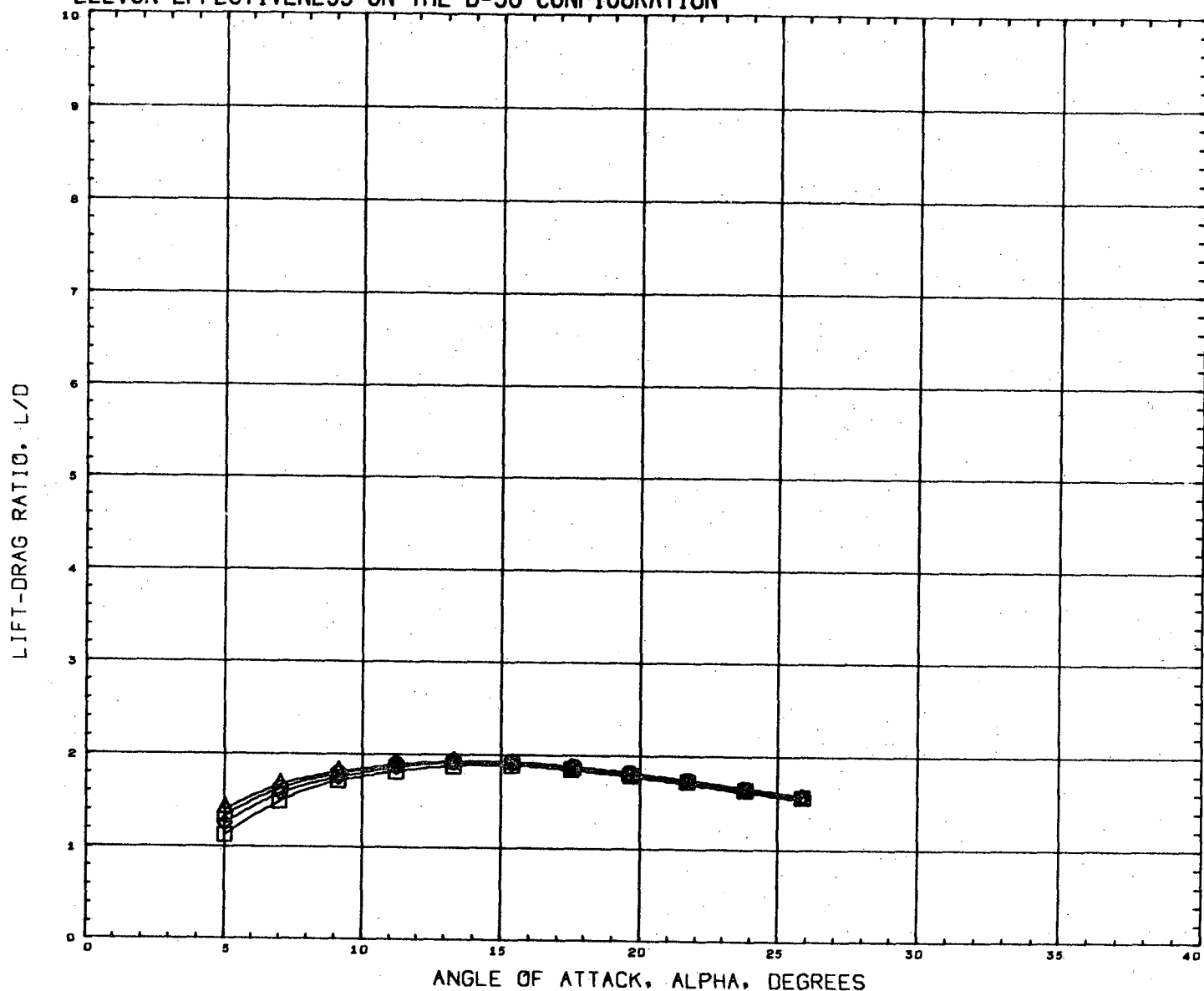
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(G35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(H35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(H35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(G35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 2.740

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

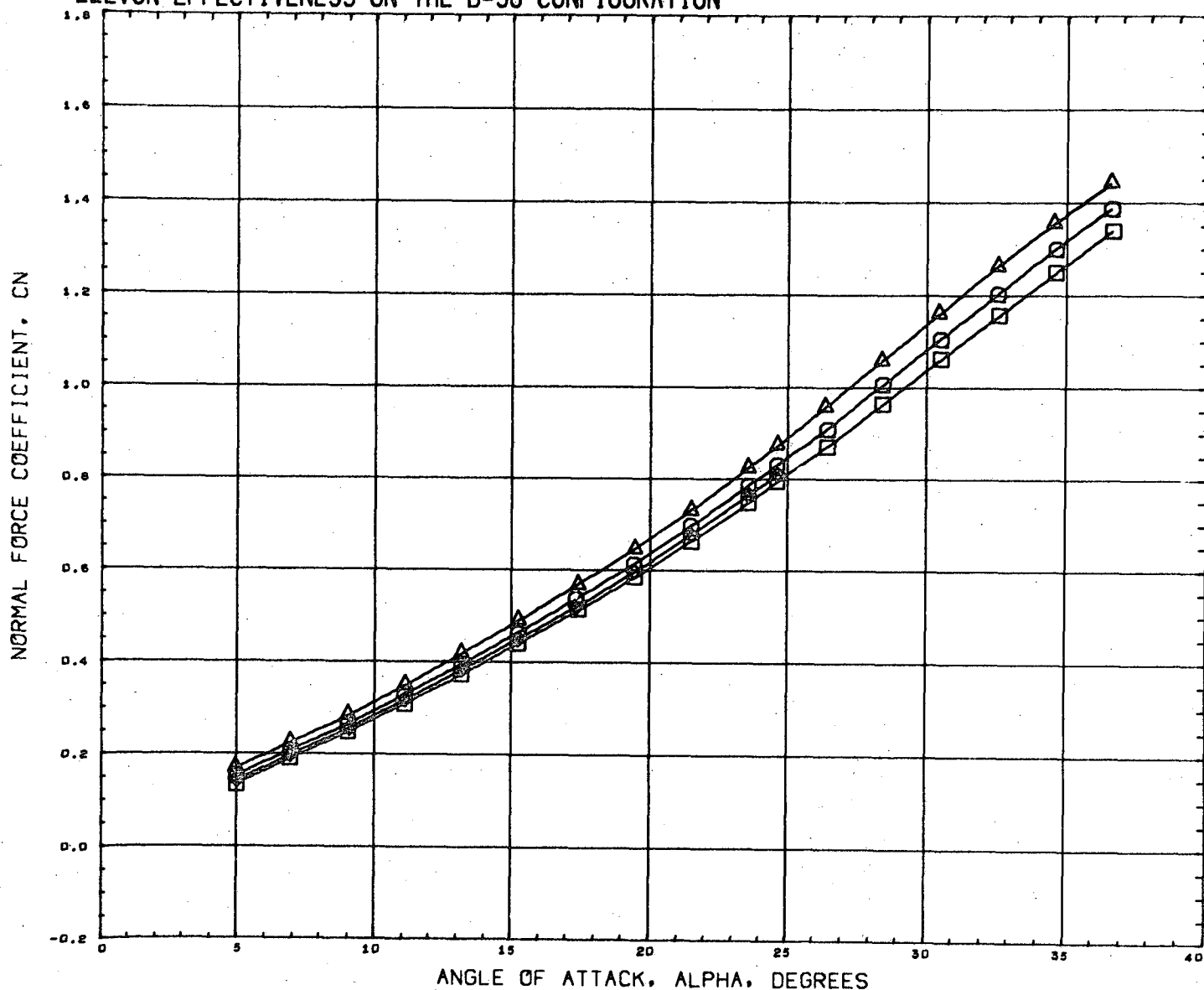


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(G35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(H35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(H35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF	6.0160 IN.
(G35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 2.740

ORIGINAL PAGE IS
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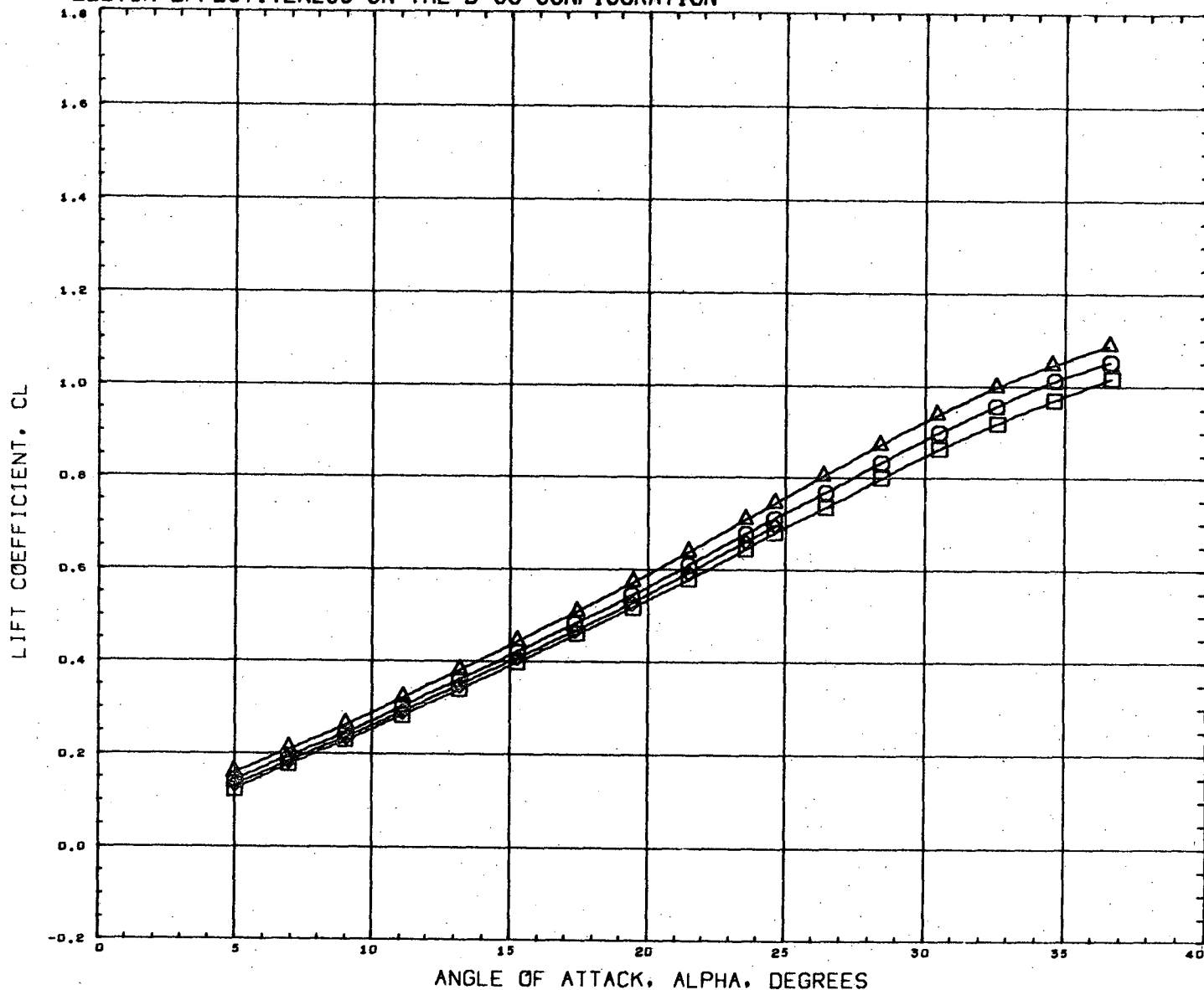
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(D35ECC)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF	14.9040 sq.in.
(E35ECB)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(G35EAC)	◻	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(D35ECD)	◼	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
							YMRP	0.0000 IN.
							ZMRP	0.0000 IN.
							SCALE	0.0035

MACH 2.990

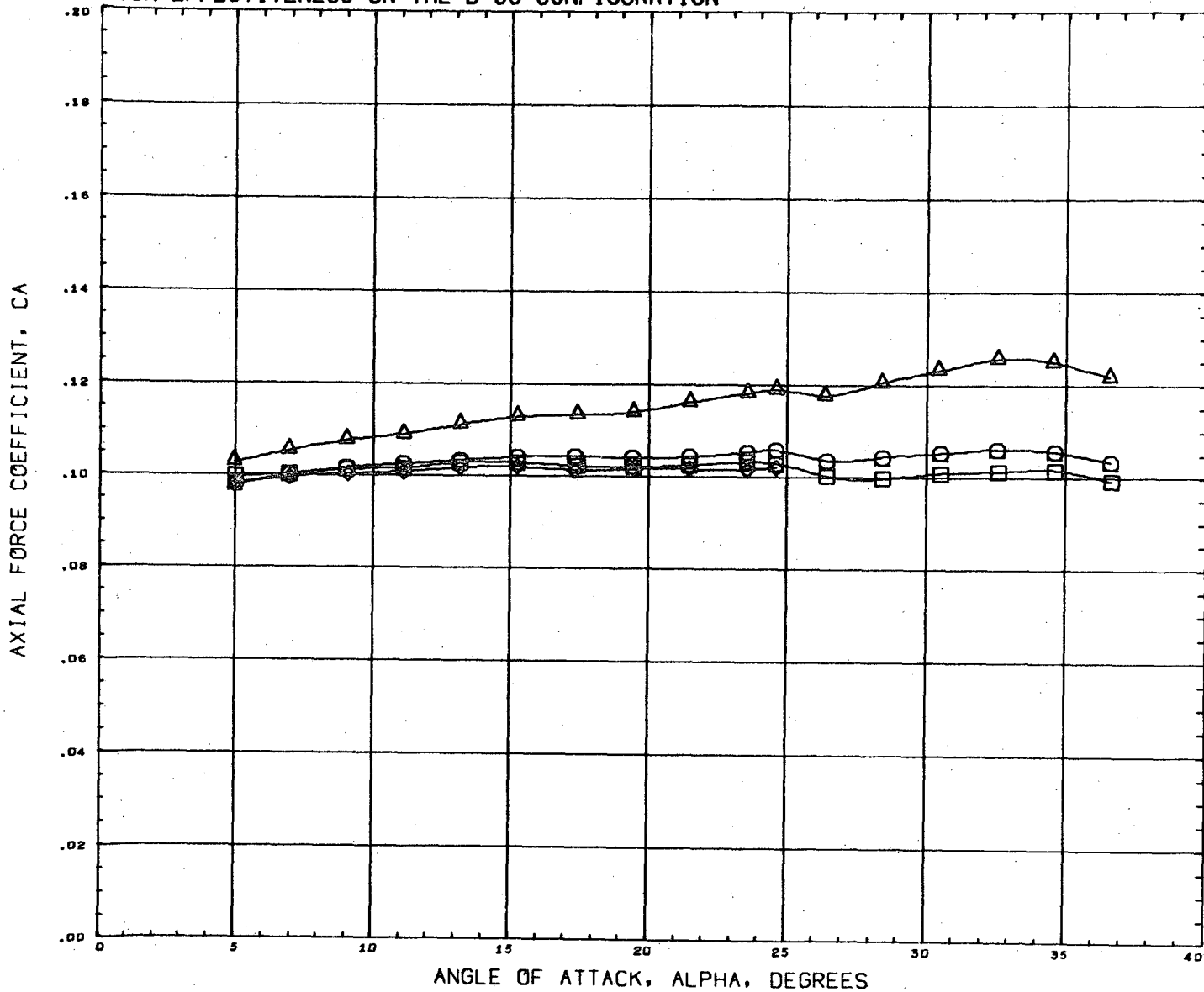
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(D35ECC)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF	14.9040 SQ.IN.
(E35ECB)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(G35EAC)	◇	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(D35ECD)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
							YMRP	0.0000 IN.
							ZMRP	0.0000 IN.
							SCALE	0.0035

MACH 2.990

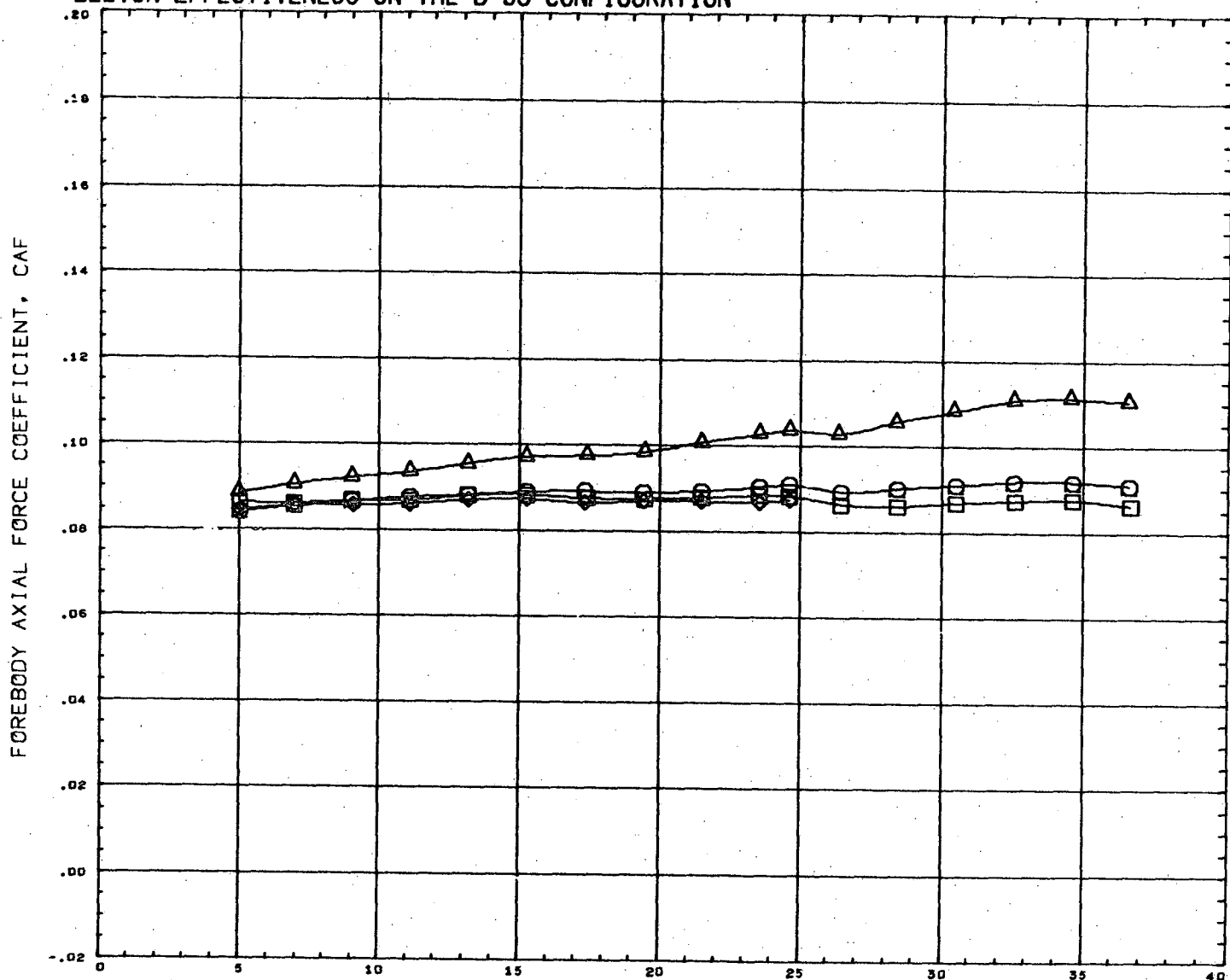
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(D35ECC)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ.IN.
(E35ECB)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(G35EAC)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(D35ECD)	◇	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0035

MACH 2.990

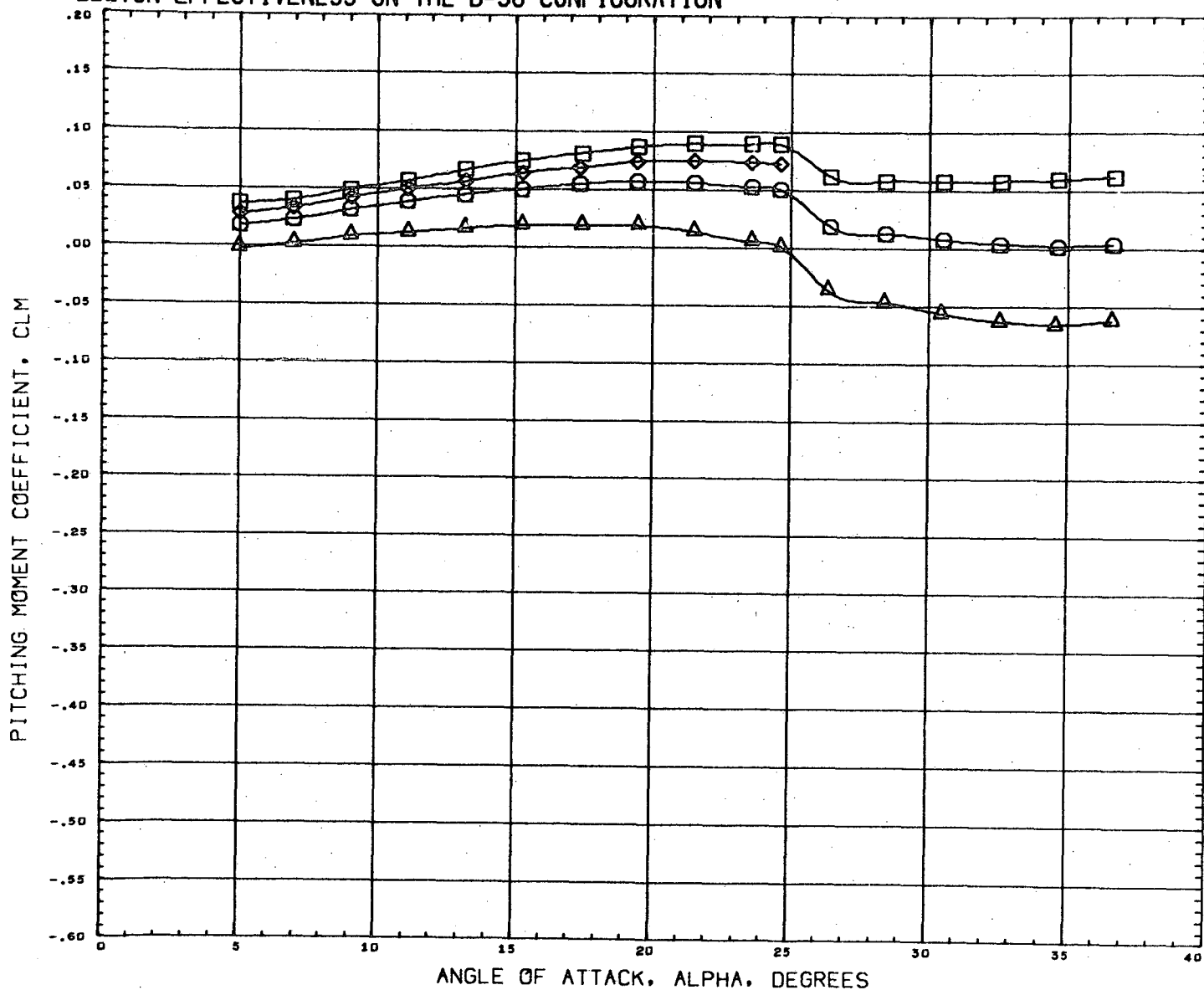
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(D35ECC)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 sq. in.
(E35ECB)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 in.
(G35EAC)	⊗	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 in.
(D35ECD)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 in.
							YMRP 0.0000 in.
							ZMRP 0.0000 in.
							SCALE 0.0035

MACH 2.990

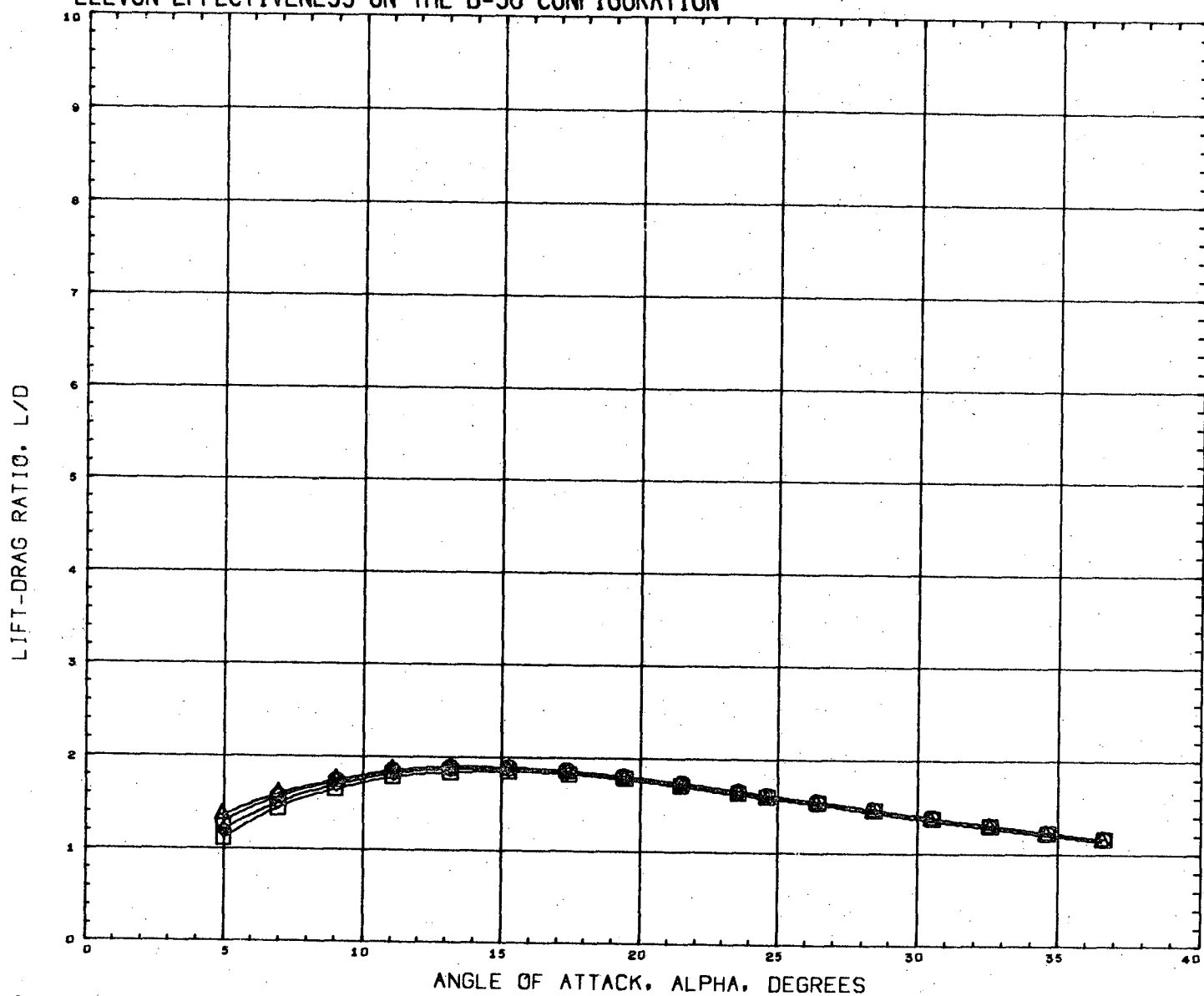
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(D35ECC)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35ECB)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(G35EAC)	◇	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(D35ECD)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0035

MACH 2.990

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



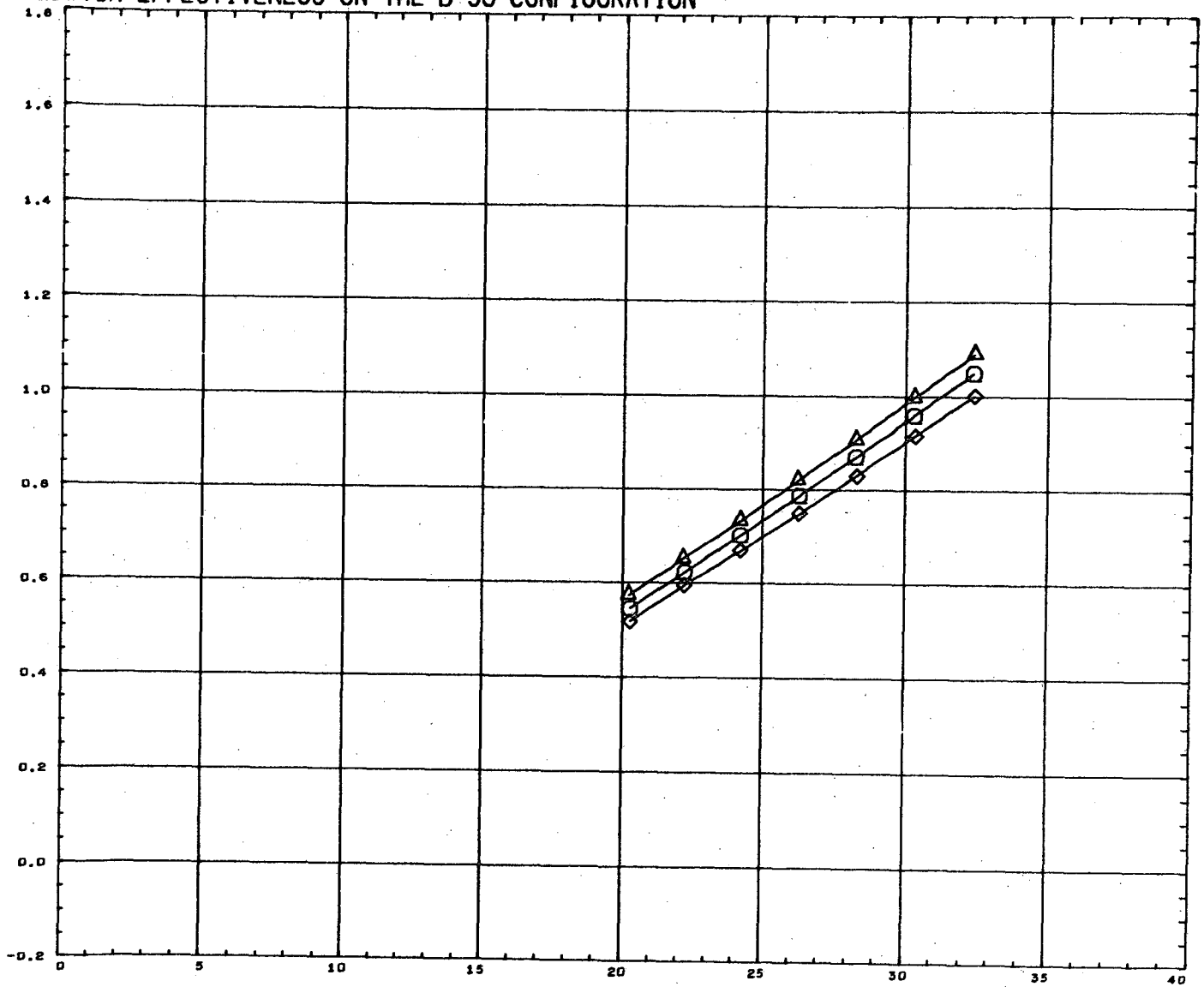
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(D35ECC)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35ECB)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(G35EAC)	×	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(D35ECD)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
							YMRP	0.0000 IN.
							ZMRP	0.0000 IN.
							SCALE	0.0035

MACH 2.990

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ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

NORMAL FORCE COEFFICIENT, CN



ANGLE OF ATTACK, ALPHA, DEGREES

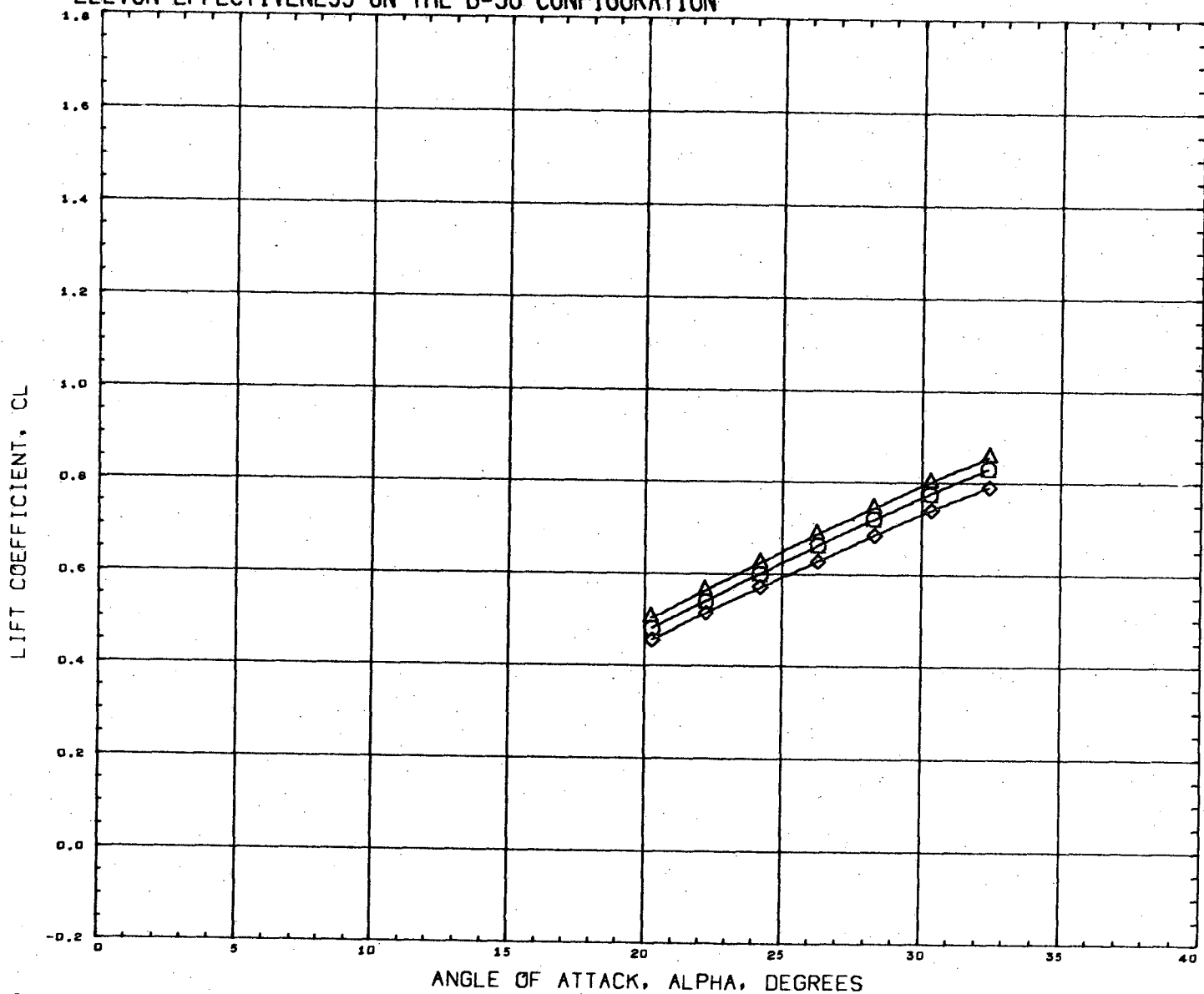
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E35EBA) Δ MSFC TWT-493 GD/C B25W19C8
 (E35EBO) \circ MSFC TWT-493 GD/C B25W19C6
 (E35EBB) \diamond MSFC TWT-493 GD/C B25W19C8

BETA	ELEVON	CANARD	RUDDER
E=10 C=D R=0	0.000 10.000	0.000	0.000
E=0 C=D R=0	0.000 0.000	0.000	0.000
E=-20 C=D R=0	0.000 -20.000	0.000	0.000

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MACH 4.450

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

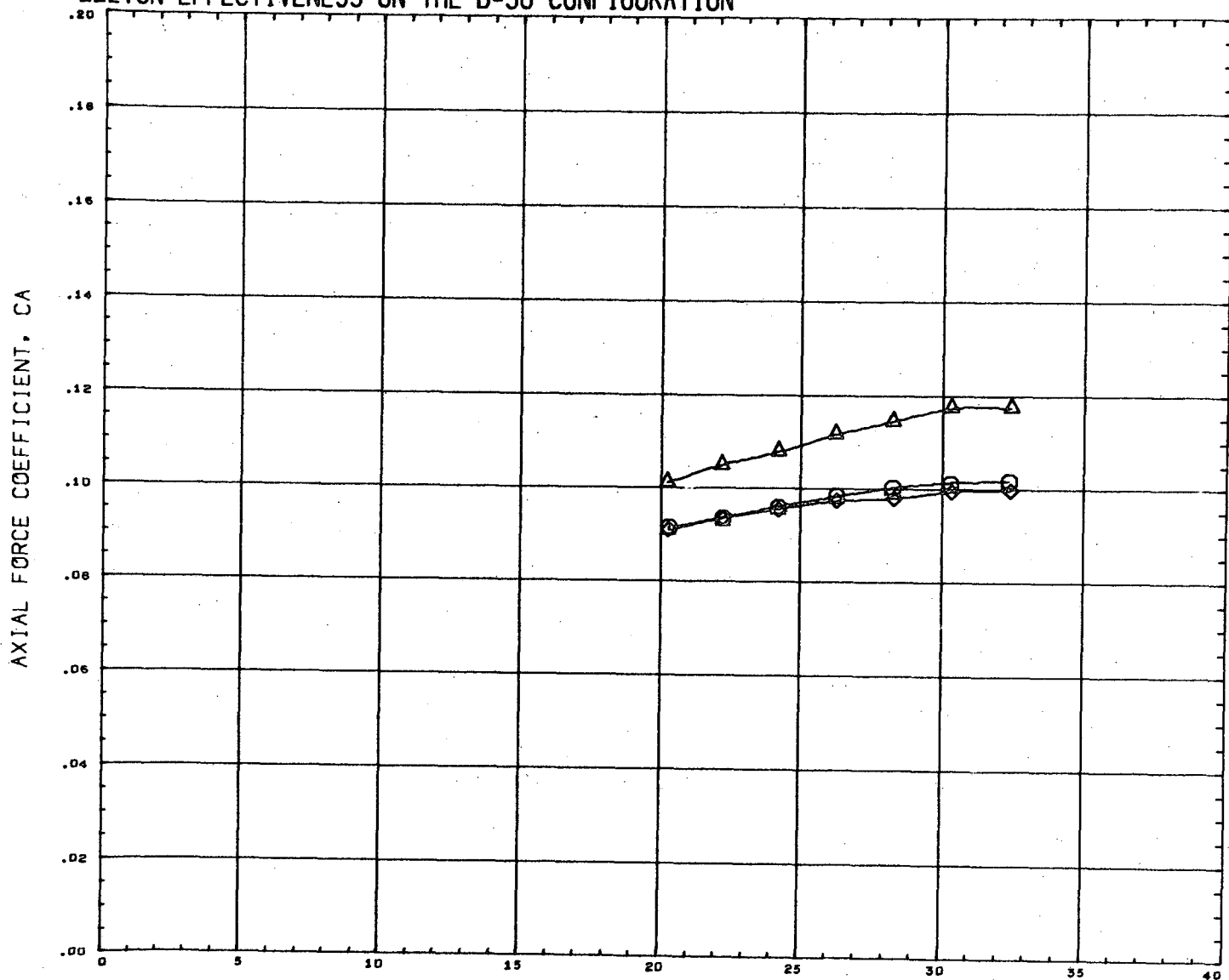


DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EBA)	△	MSFC TWT-493 GD/C B25W19C8	E=10 C=0 R=0	0.000 10.000	0.000 0.000	0.000 0.000	SREF 14.9040 SQ. IN.
(E35EBO)	○	MSFC TWT-493 GD/C B25W19C8	E=0 C=0 R=0	0.000 0.000	0.000 0.000	0.000 0.000	LREF 3.0120 IN.
(E35EBB)	◇	MSFC TWT-493 GD/C B25W19C8	E=-20 C=0 R=0	0.000 -20.000	0.000 0.000	0.000 0.000	BREF 6.0180 IN.
							XMRF 7.2990 IN.
							YMRF 0.0000 IN.
							ZMRF 0.0000 IN.
							SCALE 0.0035

MACH 4.450

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ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



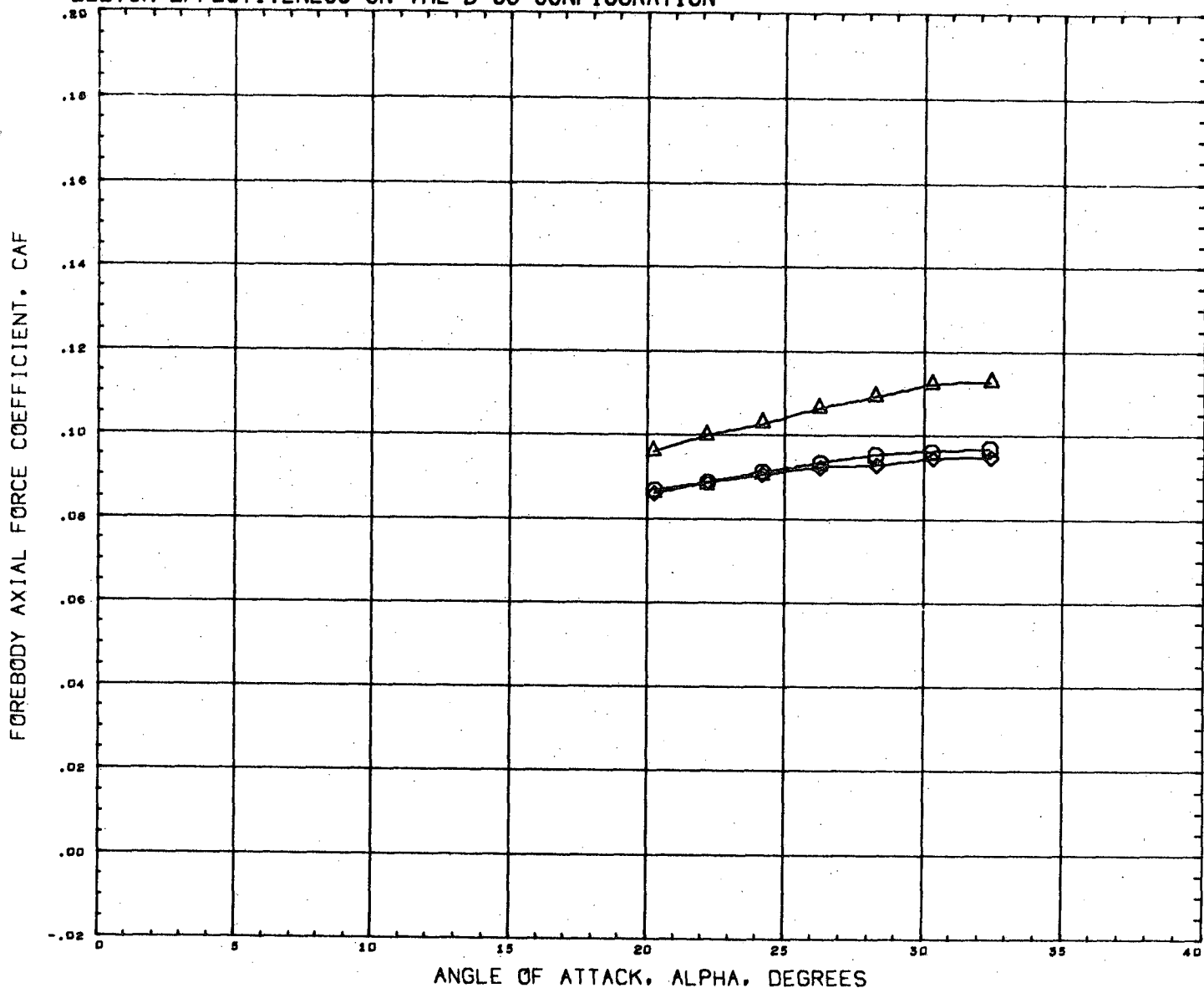
DATA SET SYMBOL CONFIGURATION DESCRIPTION
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 (E35EBO) MSFC TWT-493 GD/C B25W19C8
 (E35EBB) MSFC TWT-493 GD/C B25W19C8

ANGLE OF ATTACK, ALPHA, DEGREES

BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
E=10 C=0 R=0	0.000 10.000	0.000 0.000	0.000 0.000	SREF 14.9040 SQ. IN.
E=0 C=0 R=0	0.000 0.000	0.000 0.000	0.000 0.000	LREF 3.0120 IN.
E=-20 C=0 R=0	0.000 -20.000	0.000 0.000	0.000 0.000	BREF 6.0180 IN.
				XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

MACH 4.450

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

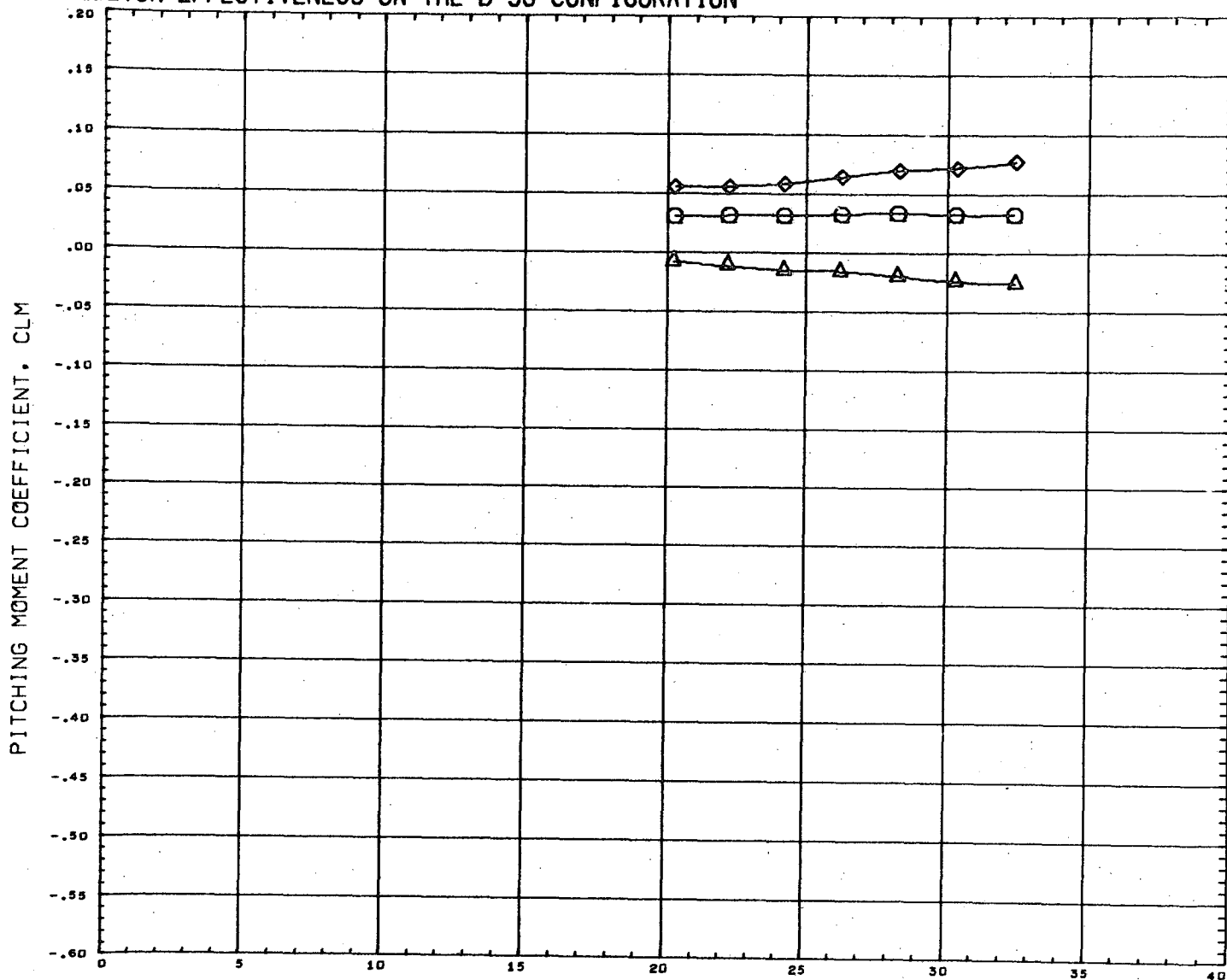


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	E	C	R	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EBA)	MSFC TWT-493 GD/C B25W19C8	E=10	C=0	R=0	0.000	10.000	0.000	0.000	SREF	14.9040 50 IN.
(E35EBD)	MSFC TWT-493 GD/C B25W19C8	E=0	C=0	R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EBB)	MSFC TWT-493 GD/C B25W19C8	E=-20	C=0	R=0	0.000	-20.000	0.000	0.000	BREF	6.0180 IN.
									XMRP	7.2990 IN.
									YMRP	0.0000 IN.
									ZMRP	0.0000 IN.
									SCALE	0.0035

MACH 4.450

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ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



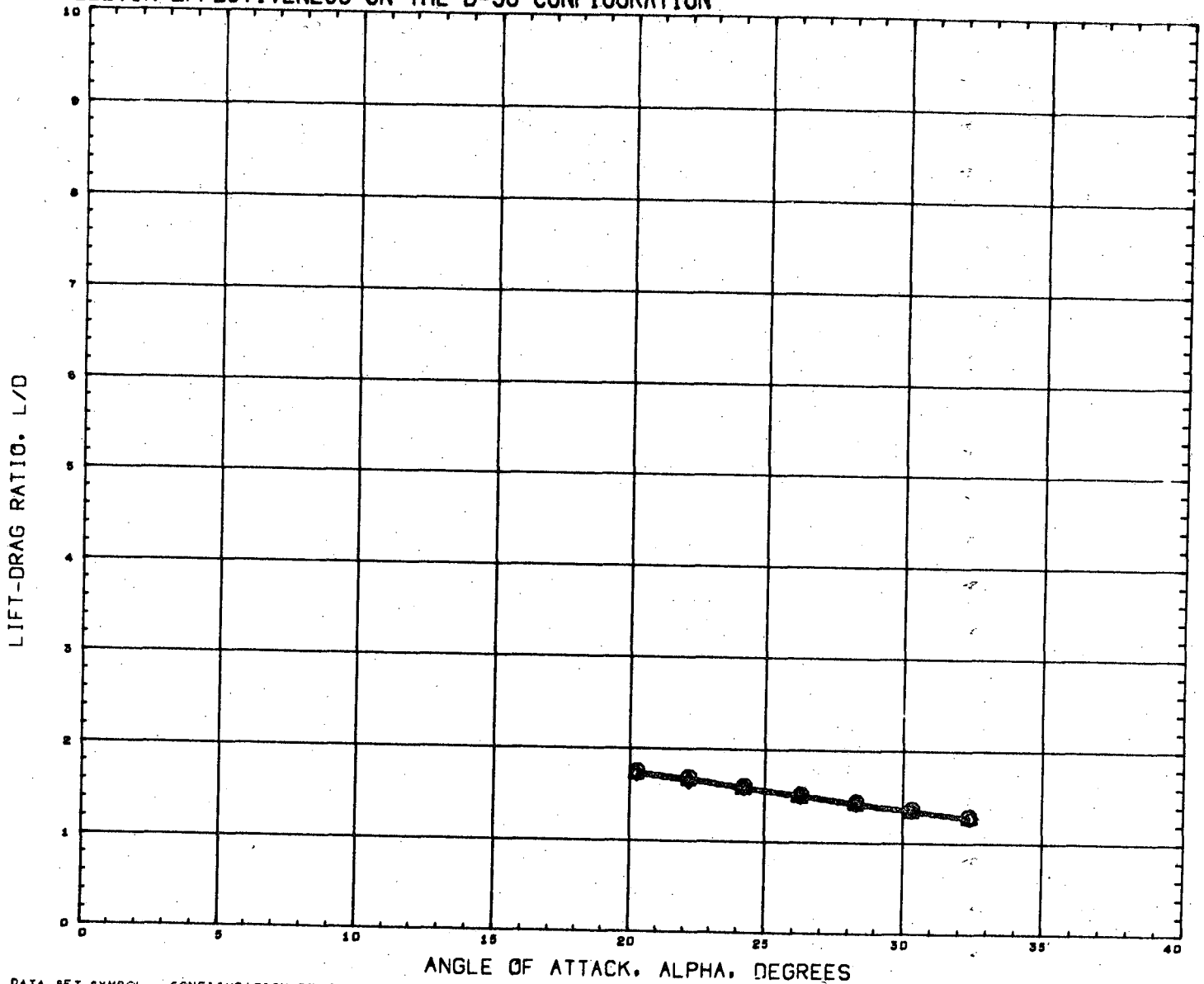
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E35EBA) \triangle	MSFC TWT-493 GD/C B25W19C8
(E35EBO) \square	MSFC TWT-493 GD/C B25W19C8
(E35EBB) \diamond	MSFC TWT-493 GD/C B25W19C8

ANGLE OF ATTACK, ALPHA, DEGREES

BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
0.000	0.000	0.000	0.000	LREF 3.0120 IN.
0.000	-20.000	0.000	0.000	BREF 6.0180 IN.
				XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

MACH 4.450

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

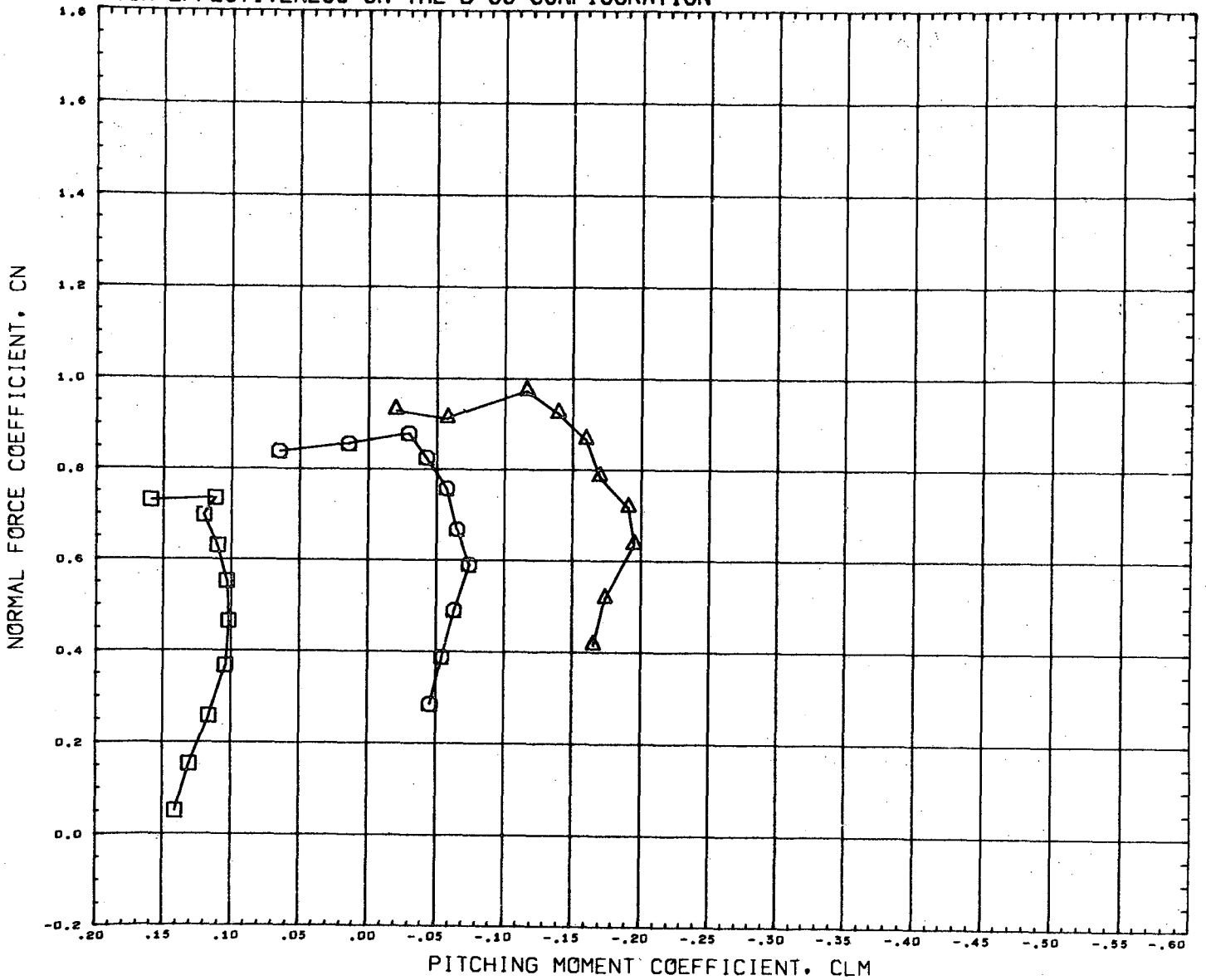


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EBA)	MSFC TWT-493 GD/C B25W19C8	E=10 C=D R=D	0.000 10.000	0.000 0.000	0.000 0.000	SREF 14.9040 88. IN.
(E35EBO)	MSFC TWT-493 GD/C B25W19C8	E=0 C=D R=D	0.000 0.000	0.000 0.000	0.000 0.000	LREF 3.0120 IN.
(E35EBB)	MSFC TWT-493 GD/C B25W19C8	E=-20 C=D R=D	0.000 -20.000	0.000 0.000	0.000 0.000	SREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 4.450

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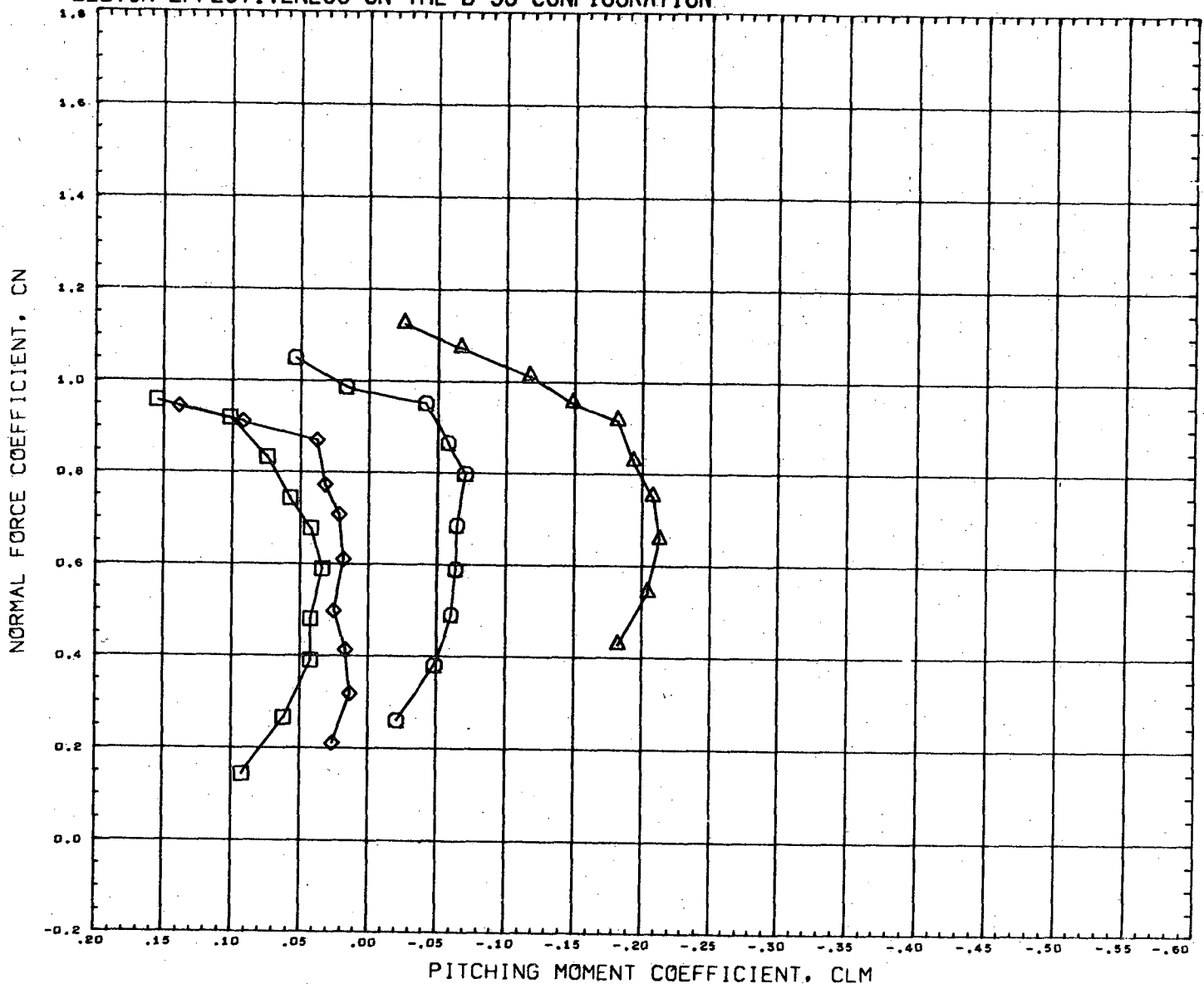
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=D R=D	0.000	10.000	0.000	0.000	SREF 14.9040 SQ.IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=D R=D	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=D R=D	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 0.594

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

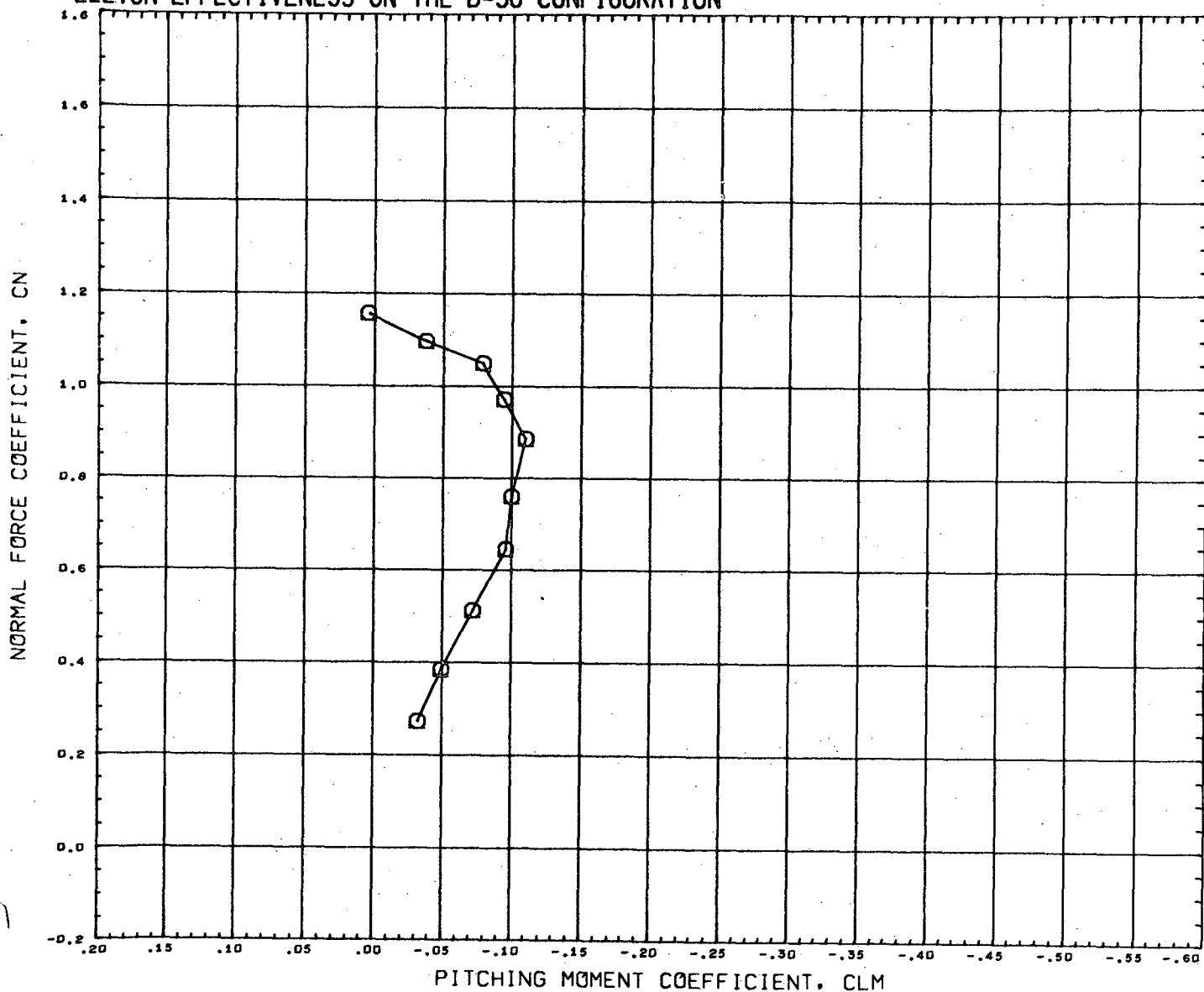


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ.IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 0.897

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ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



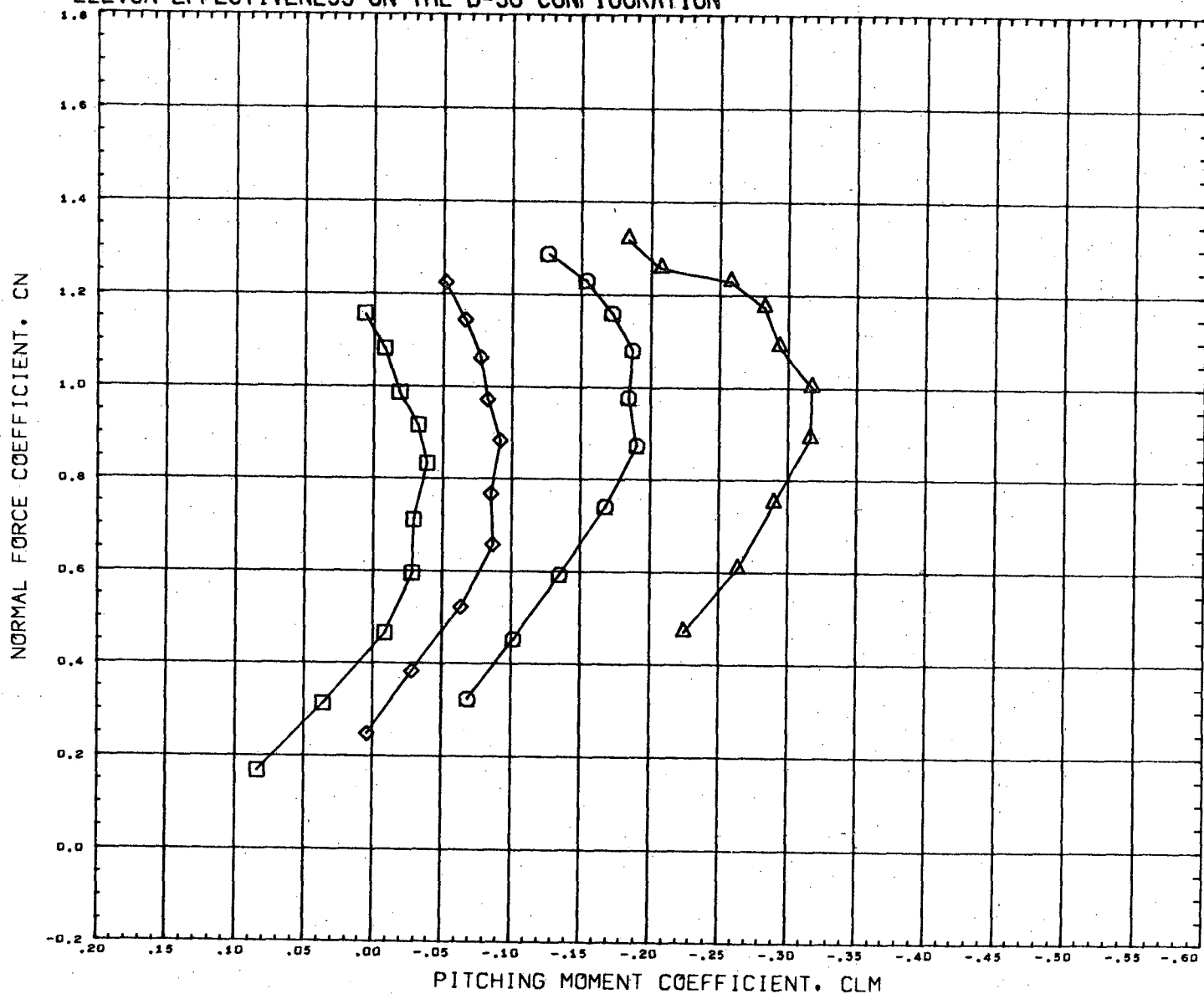
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E35EAA) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35EAO) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0
 (E35EAC) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35EAB) DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
0.000	0.000	0.000	0.000	LREF 3.0120 IN.
0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
0.000	-20.000	0.000	0.000	XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

MACH 0.961

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

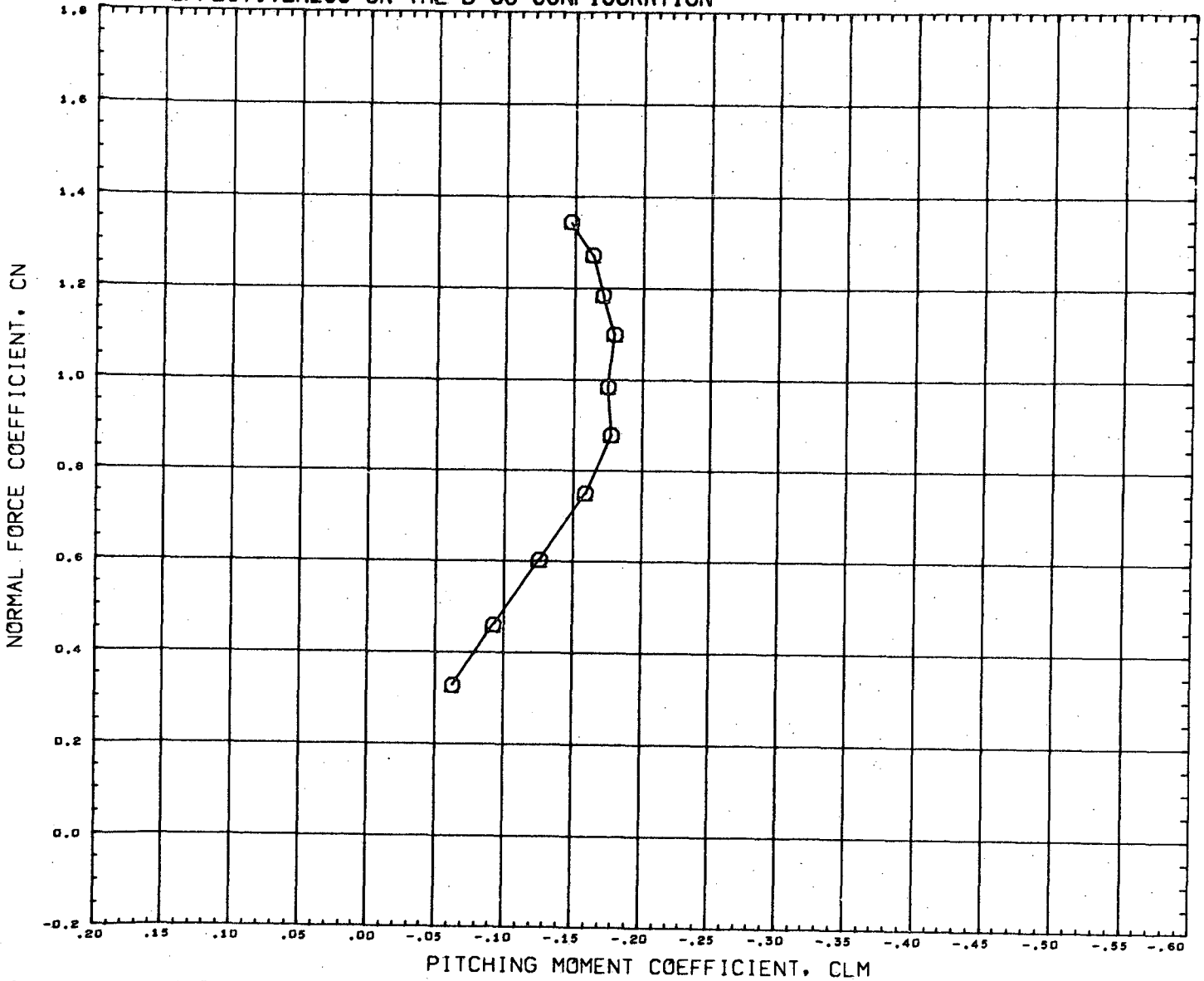


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 0.999

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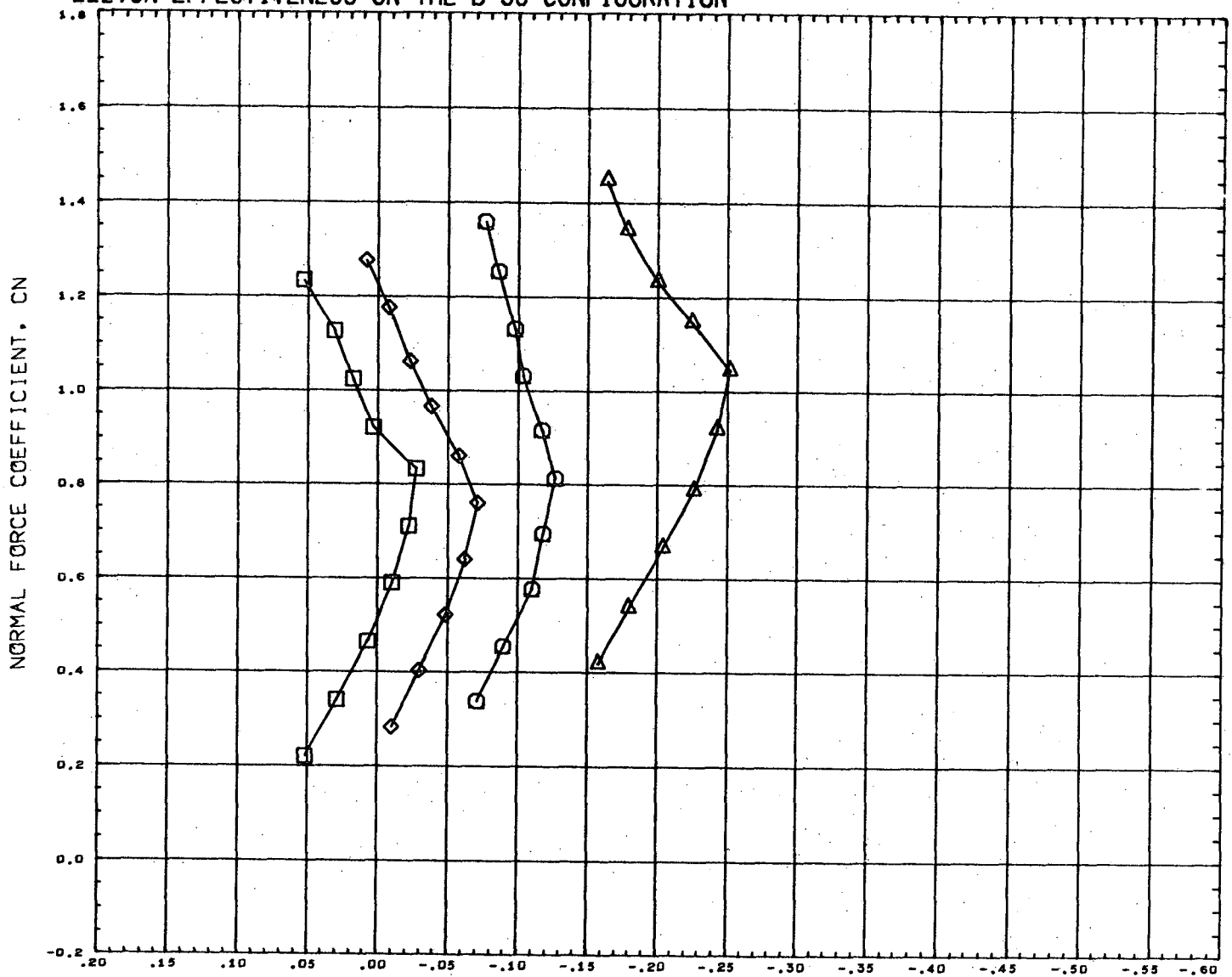
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=D C=D R=D	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-20.000	0.000	0.000	XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 1.043

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

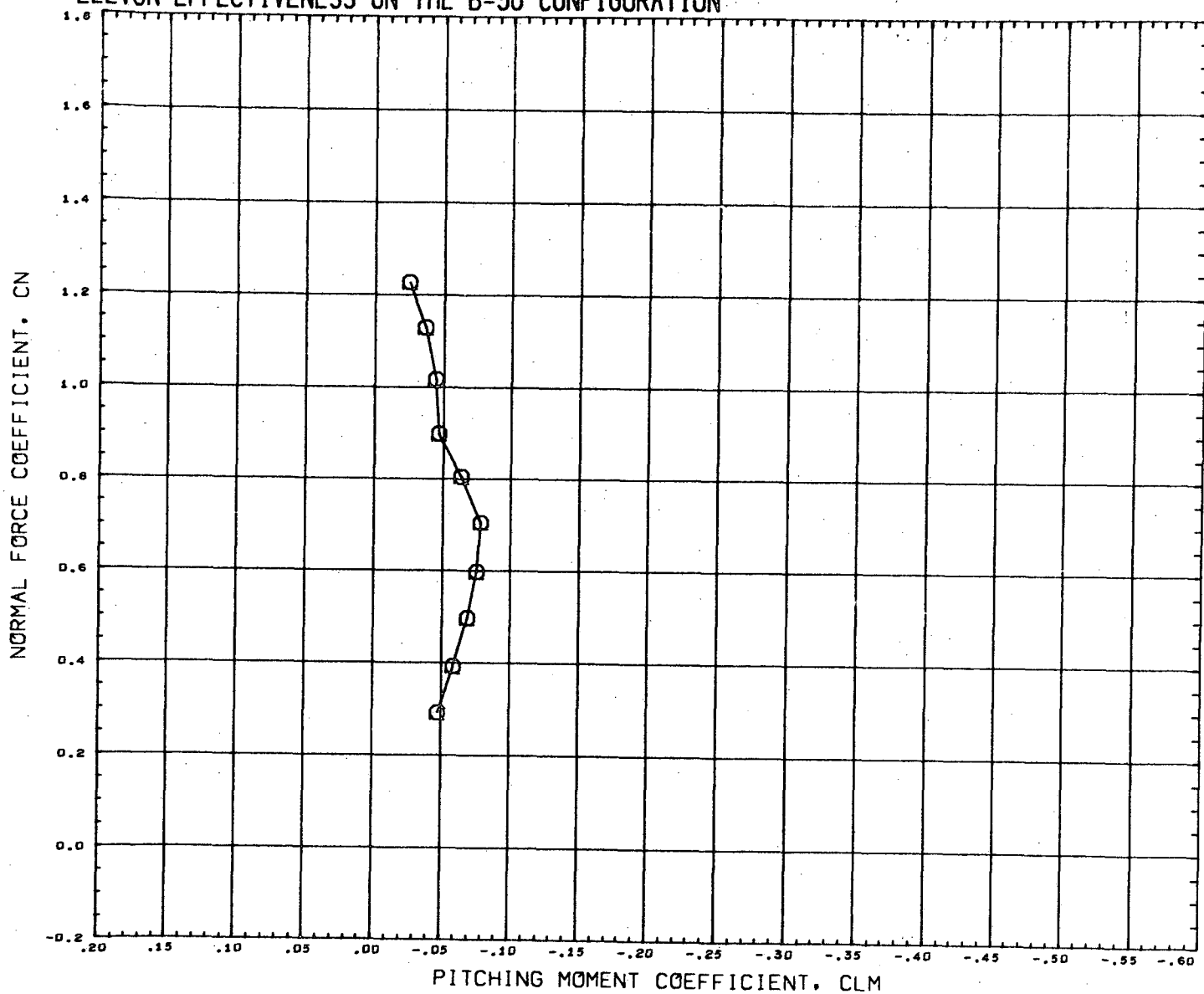


DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EAA)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35EAO)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(E35EAC)	◇	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(E35EAB)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRF 7.2990 IN.
							YMRF 0.0000 IN.
							ZMRF 0.0000 IN.
							SCALE 0.0035

MACH 1.195

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OF POOR QUALITY

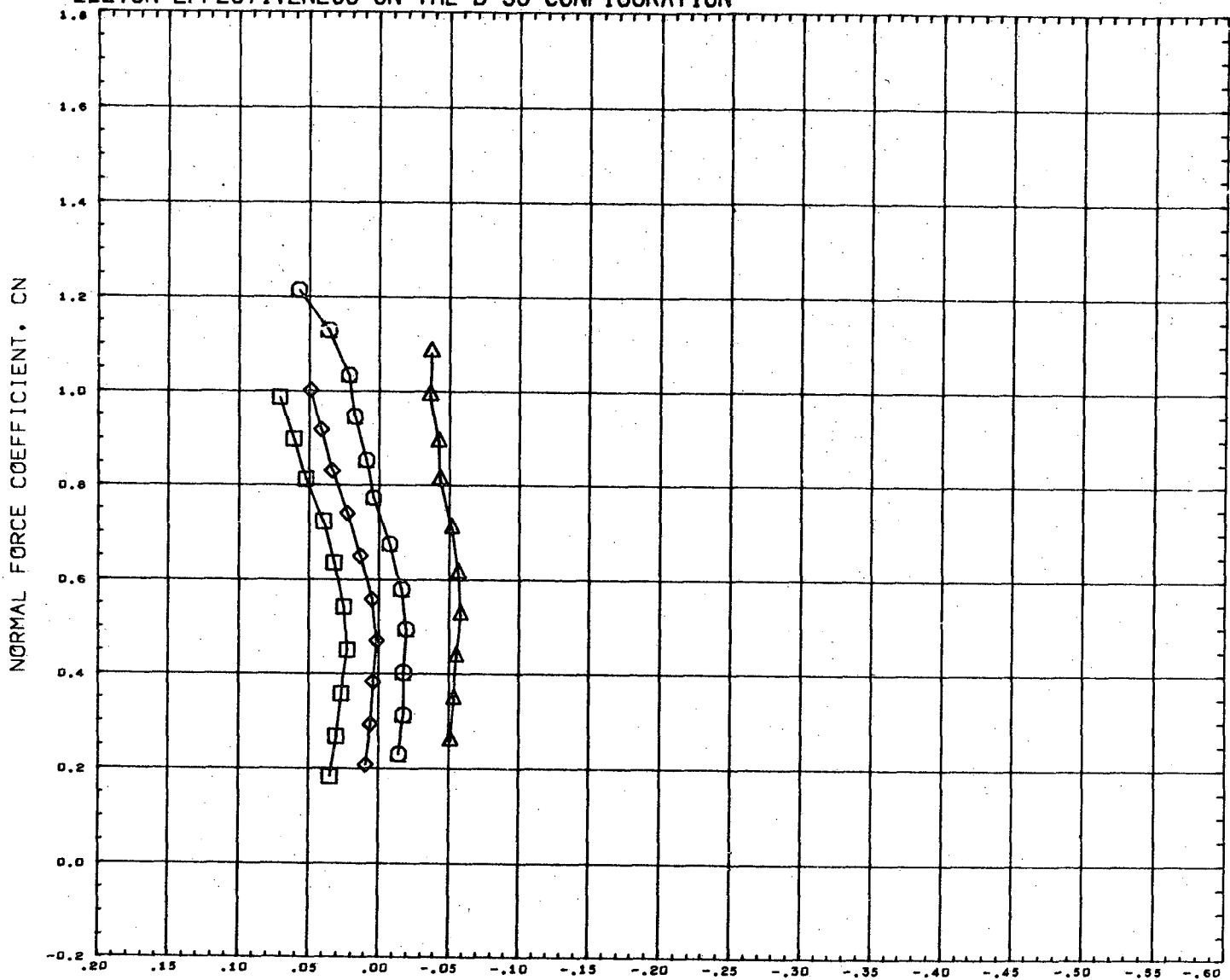
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EAA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	10.000	0.000	0.000	SREF	14.9040 50. IN.
(E35EAO)	MSFC TWT-493 GD/C B25W19C0V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(E35EAC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(E35EAB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.453

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



PITCHING MOMENT COEFFICIENT, CLM

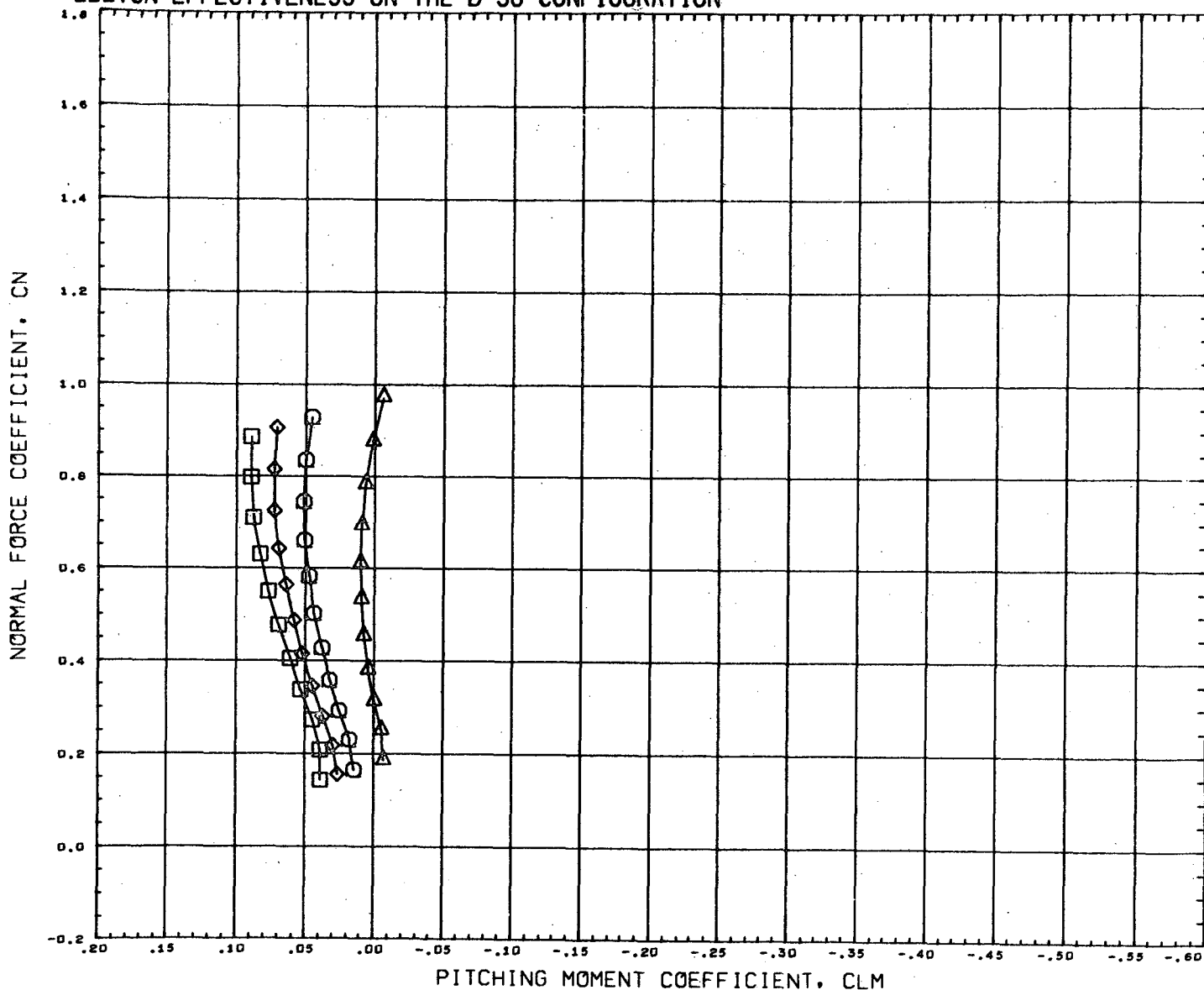
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(F35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35ECA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(F35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(F35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 1.955

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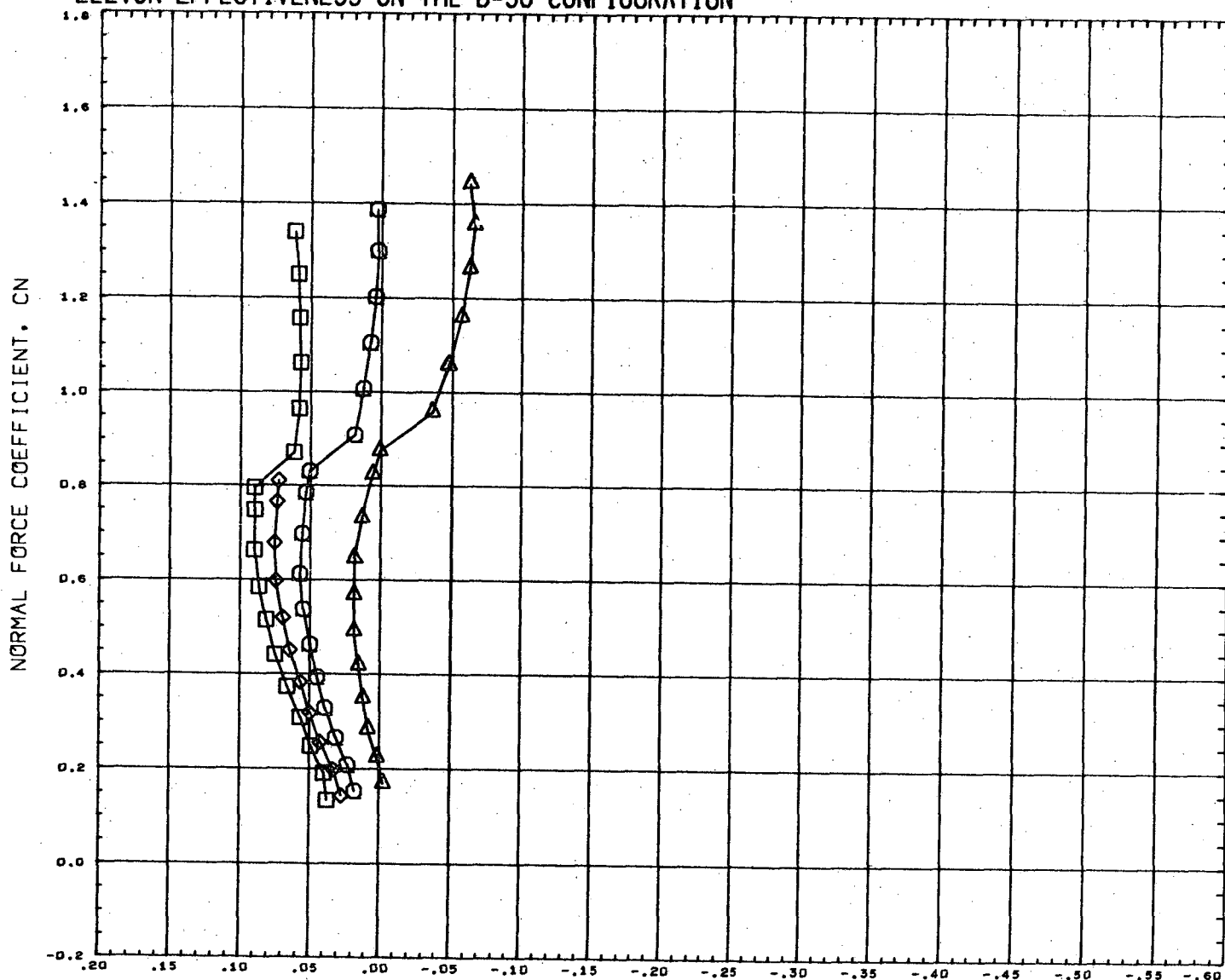
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION		
(G35EAA)	△	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF	14.9040	sq. in.
(H35EAO)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120	in.
(H35EAC)	◇	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF	6.0180	in.
(G35EAB)	□	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP	7.2990	in.
							YMRP	0.0000	in.
							ZMRP	0.0000	in.
							SCALE	0.0035	

MACH 2.740

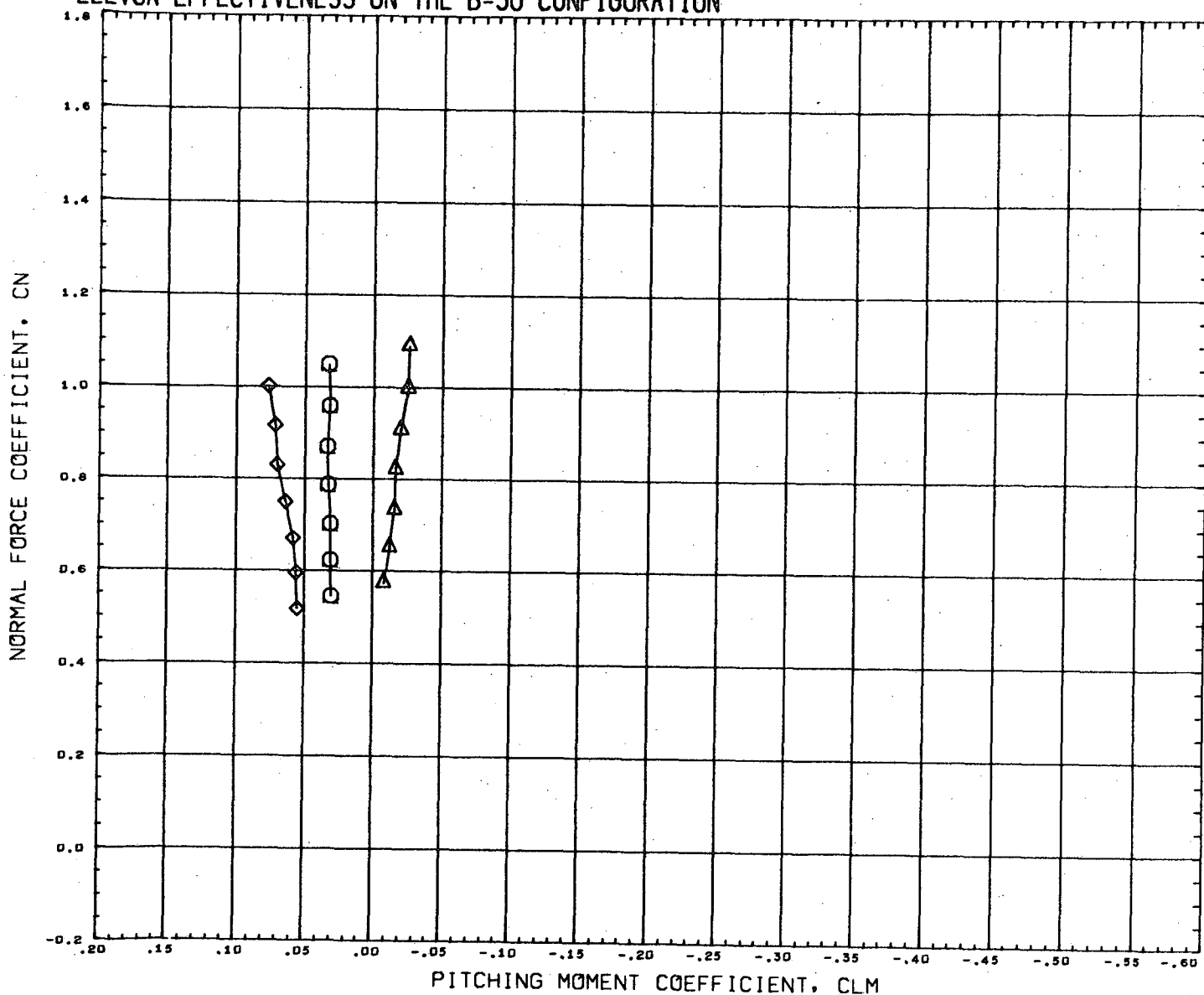
ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(D35ECC)	MSFC TWT-493 GD/C B25W19C8V10 E=10 C=0 R=0	0.000	10.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35ECB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(G35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-10 C=0 R=0	0.000	-10.000	0.000	0.000	BREF	6.0180 IN.
(D35ECD)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 2.990

ELEVON EFFECTIVENESS ON THE B-9U CONFIGURATION

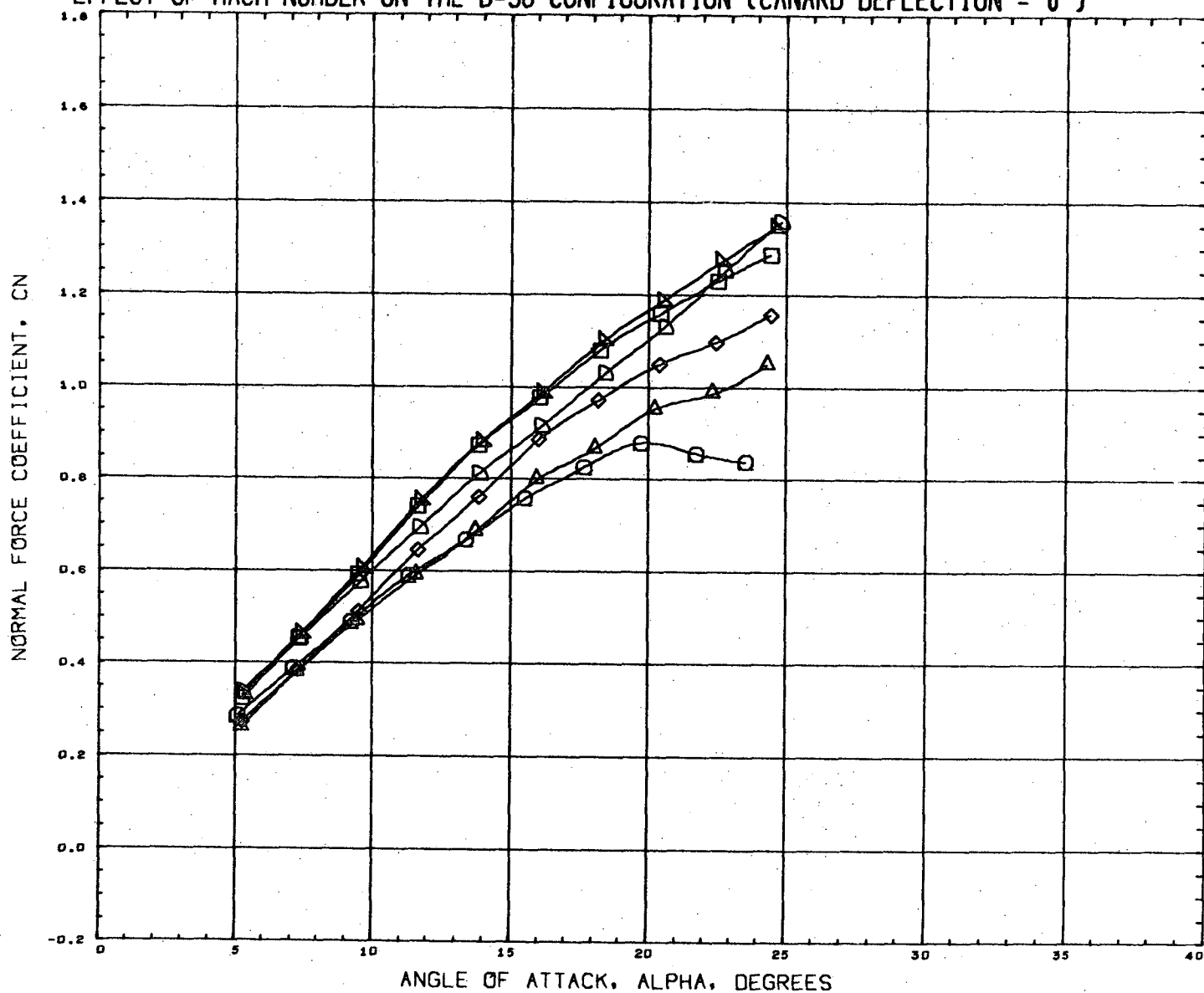


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E35EBA) \triangle	MSFC TWT-493 GD/C B25W19C8
(E35EBO) \circ	MSFC TWT-493 GD/C B25W19C8
(E35EBB) \diamond	MSFC TWT-493 GD/C B25W19C8

BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
E=10 C=0 R=0	0.000 10.000	0.000 0.000	0.000 0.000	SREF 14.9040 SQ. IN.
E=0 C=0 R=0	0.000 0.000	0.000 0.000	0.000 0.000	LREF 3.0120 IN.
E=-20 C=0 R=0	0.000 -20.000	0.000 0.000	0.000 0.000	BREF 6.0180 IN.
				XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

MACH 4.450

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = 0)



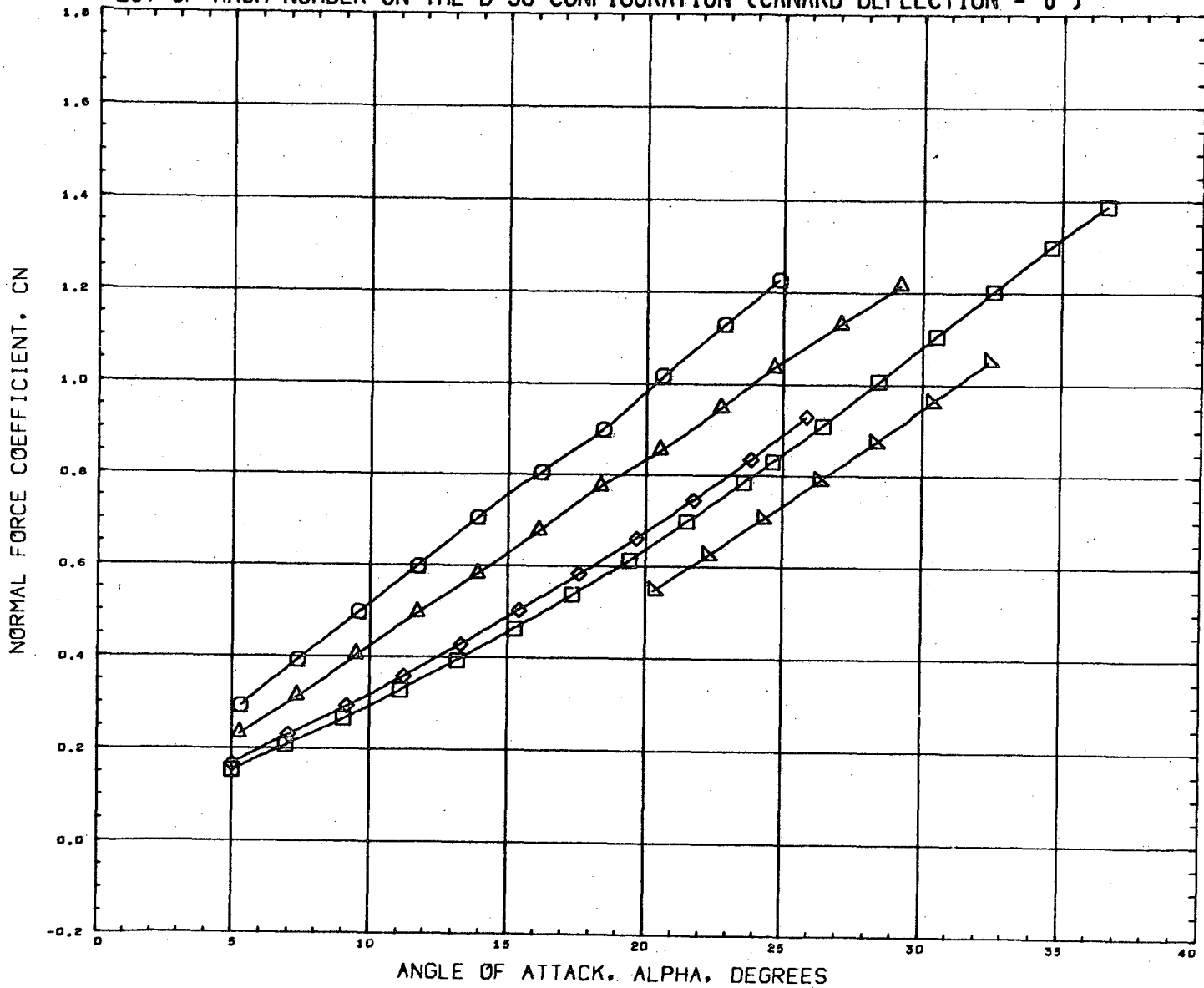
SYMBOL	MACH	PARAMETRIC VALUES			
○	0.599	BETA	0.000	ELEVON	0.000
△	0.899	CANARD	0.000	RUDDER	0.000
◇	0.961				
◊	1.002				
◈	1.043				
◉	1.194	DATA HIST. CODE	*E*A		

REFERENCE INFORMATION		
SREF	14.9040	sq. in.
LREF	3.0120	in.
BREF	6.0180	in.
XMRP	7.2990	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0035	

MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0 (G35EA0) 22 SEP 71 PAGE 78

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EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = 0)

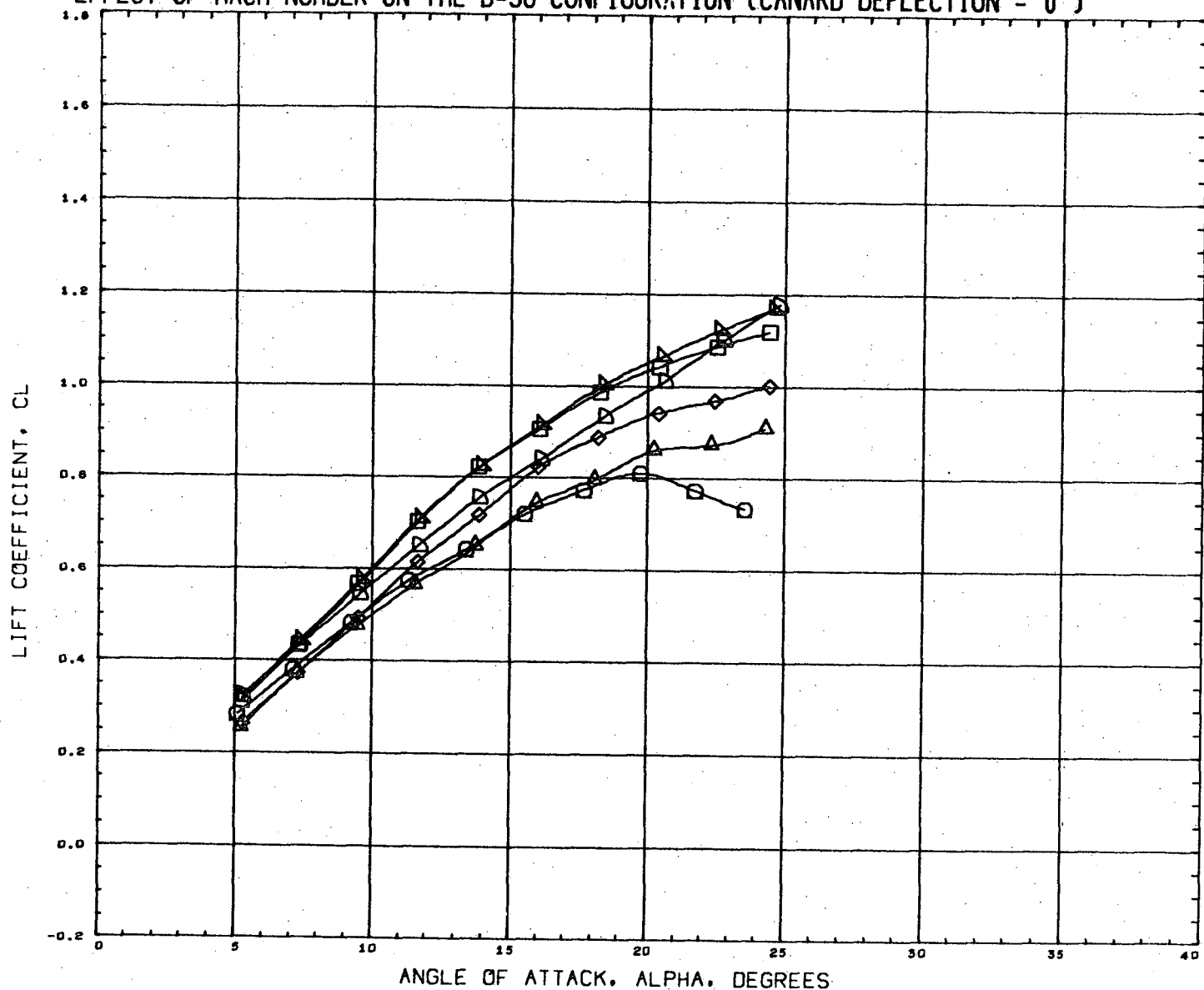


SYMBOL	MACH	PARAMETRIC VALUES			
○	1.453	BETA	0.000	ELEVON	0.000
◇	1.953	CANARD	0.000	RUDDER	0.000
△	2.740				
□	2.990				
×	4.450				

DATA HIST. CODE #E#A

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = 0)



ANGLE OF ATTACK, ALPHA, DEGREES

SYMBOL	MACH	PARAMETRIC VALUES			
○	0.599	BETA	0.000	ELEVON	0.000
◇	0.899	CANARD	0.000	RUDDER	0.000
△	0.961				
□	1.002				
◇	1.043				
△	1.194				
○		DATA HIST. CODE	*E#A		

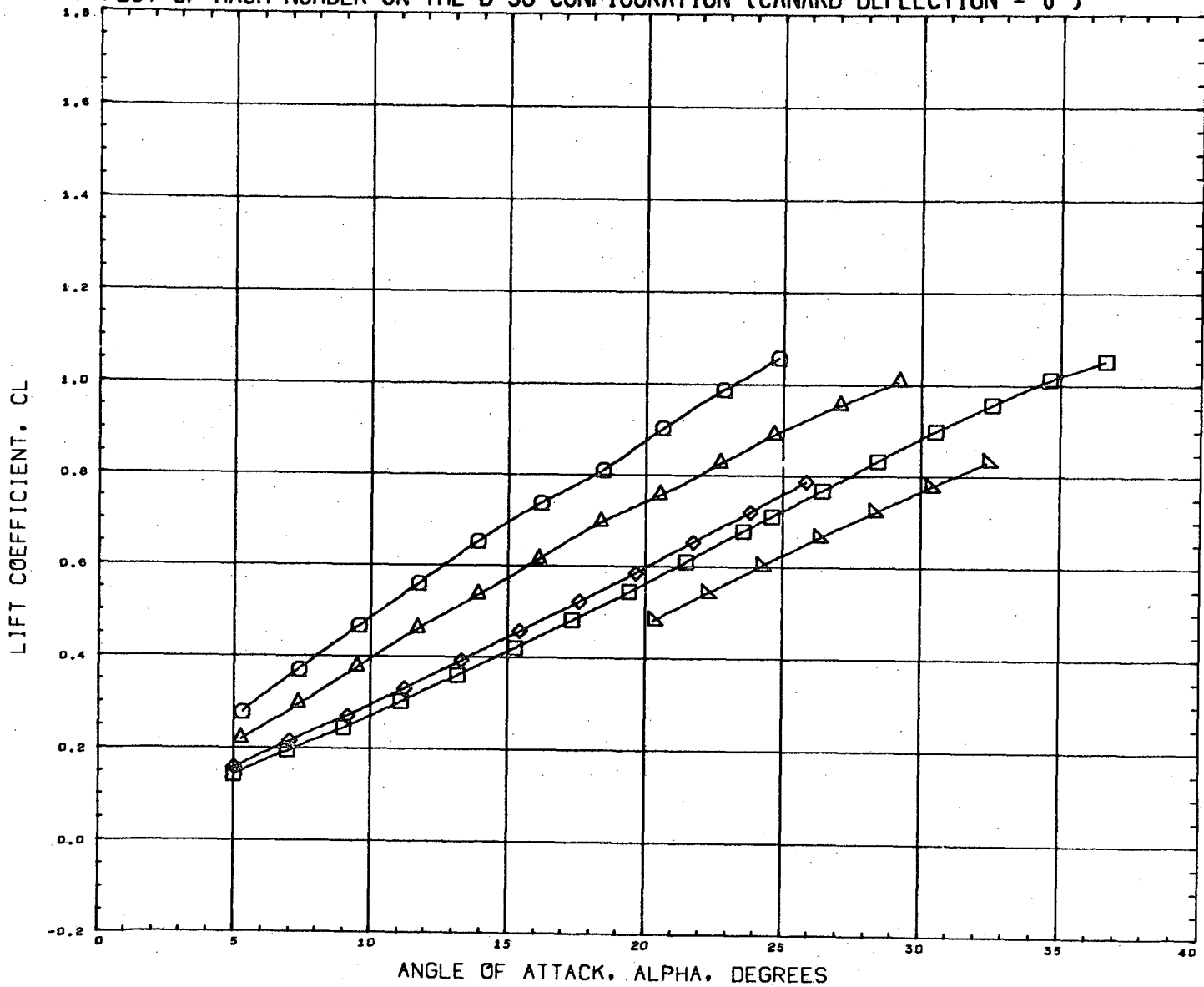
REFERENCE INFORMATION

SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0 (G35EA0) 22 SEP 71 PAGE 80

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EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = 0)

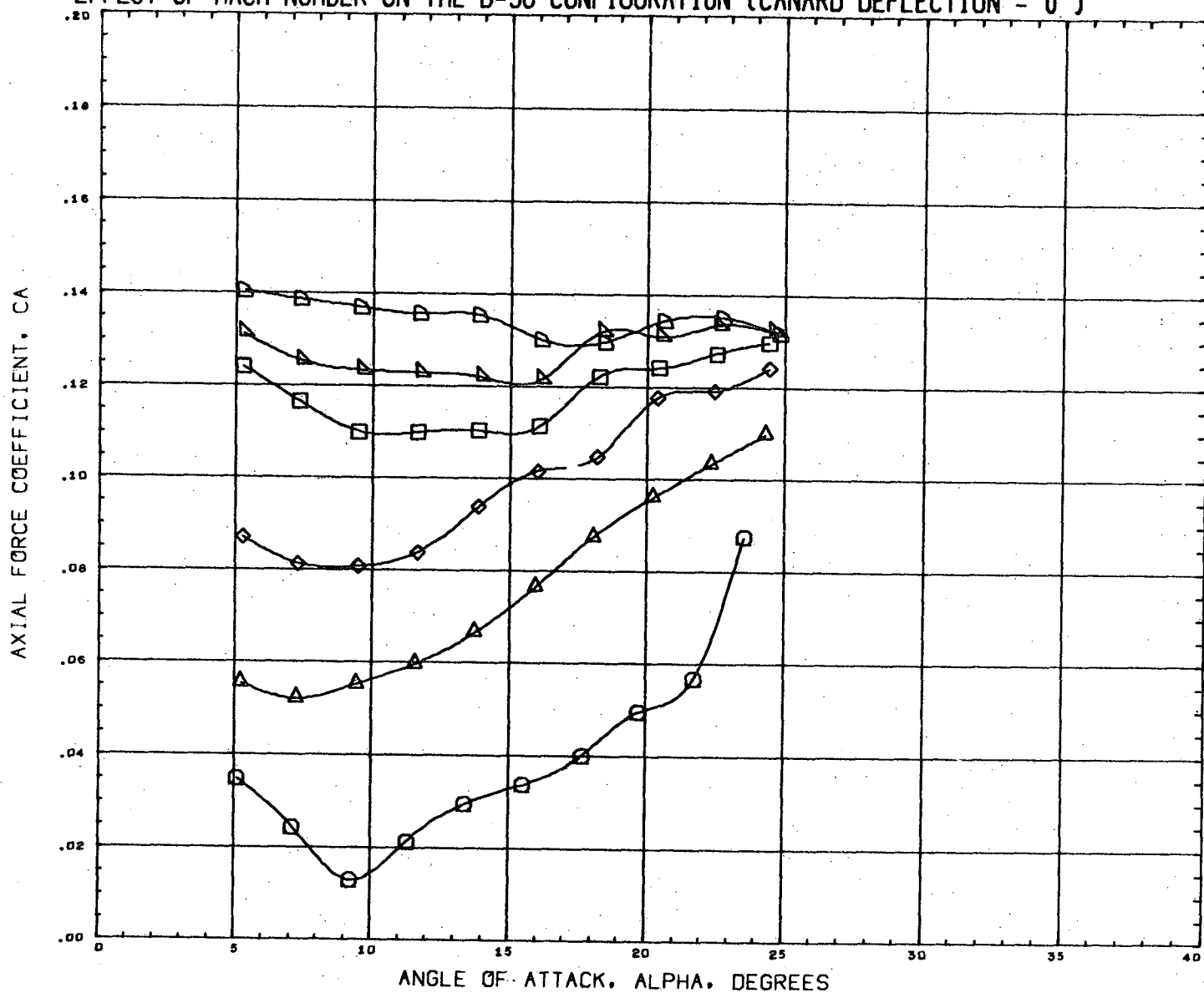


SYMBOL	MACH	PARAMETRIC VALUES			
○	1.453	BETA	0.000	ELEVON	0.000
△	1.953	CANARD	0.000	RUDDER	0.000
◇	2.740				
□	2.990				
×	4.450				

DATA HIST. CODE *E#A

REFERENCE INFORMATION		
SREF	14.9040	sq. in.
LREF	3.0120	in.
BREF	6.0180	in.
XMRP	7.2990	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0035	

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = 0)



SYMBOL MACH PARAMETRIC VALUES

□	0.599	BETA	0.000	ELEVON	0.000
◇	0.899	CANARD	0.000	RUDDER	0.000
◇	0.961				
◇	1.002				
◇	1.043				
◇	1.194	DATA HIST. CODE	#E*		

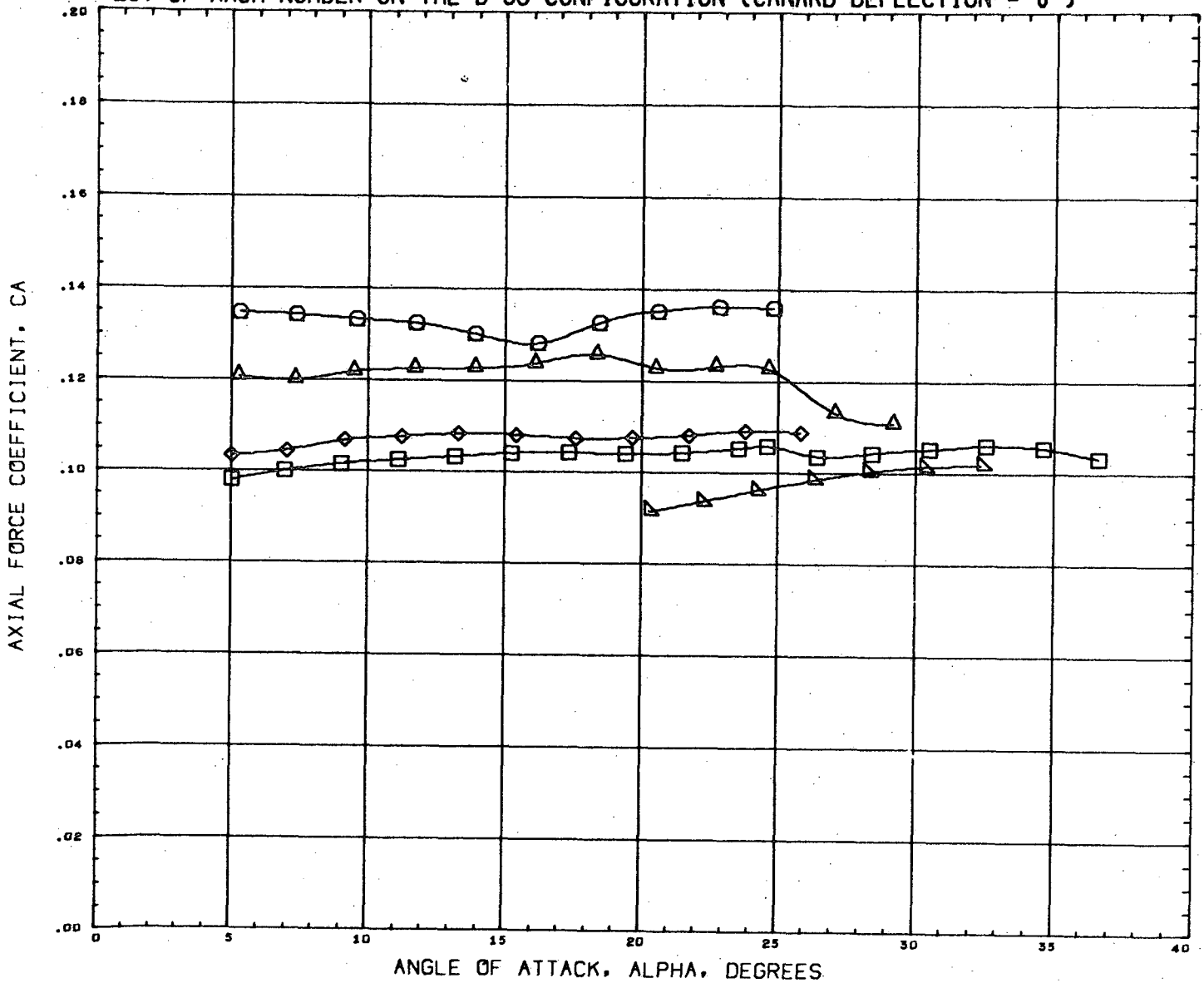
REFERENCE INFORMATION

SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0 (G35EA0) 22 SEP 71 PAGE 82

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OF POOR QUALITY

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = 0)

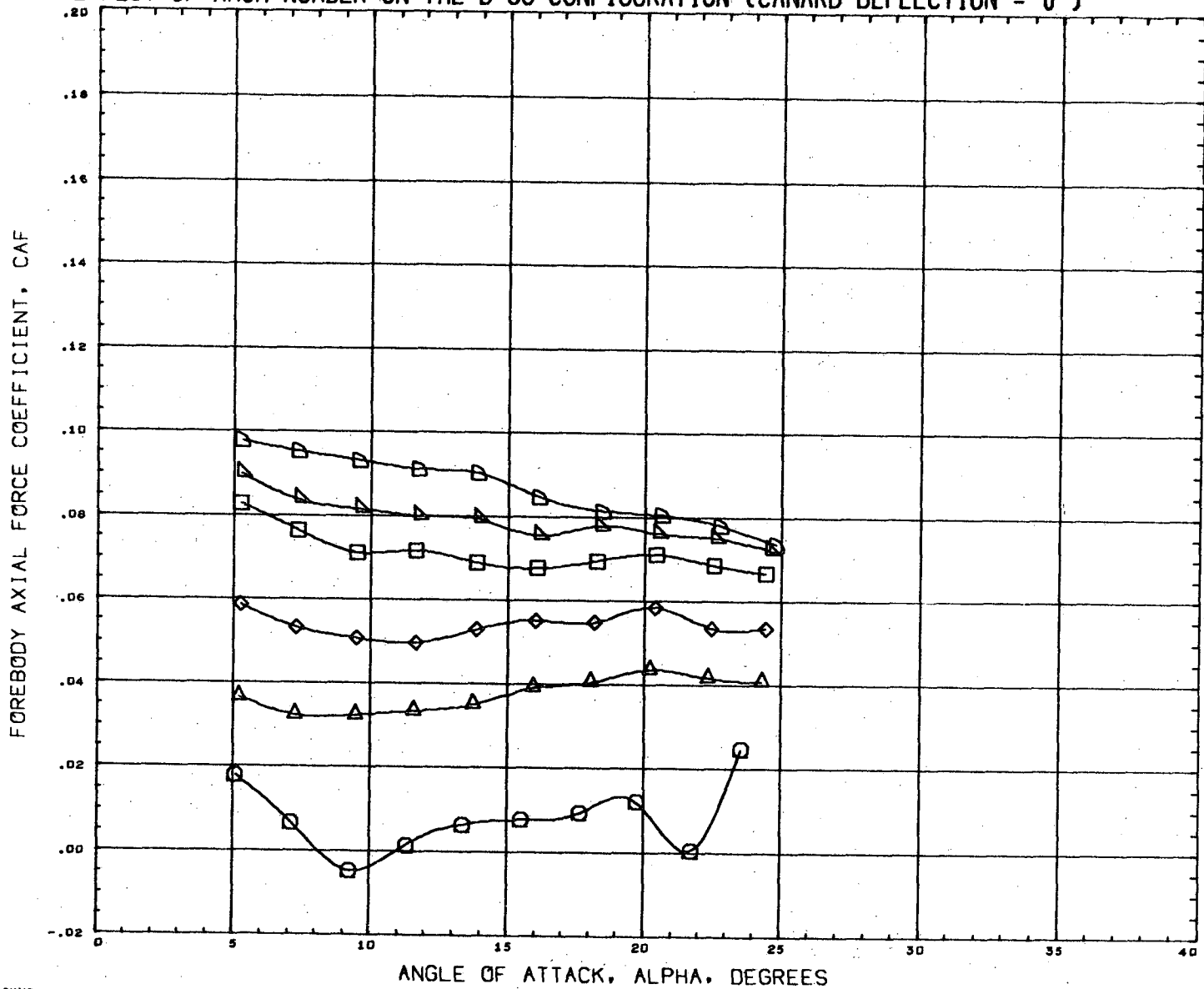


SYMBOL	MACH	PARAMETRIC VALUES			
○	1.453	BETA	0.000	ELEVON	0.000
◇	1.953	CANARD	0.000	RUDDER	0.000
△	2.740				
□	2.990				
◻	4.450				

DATA HIST. CODE *E*A

REFERENCE INFORMATION		
SREF	14.9040	sq.in.
LREF	3.0120	in.
BREF	6.0180	in.
XMRP	7.2990	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0035	

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = 0)



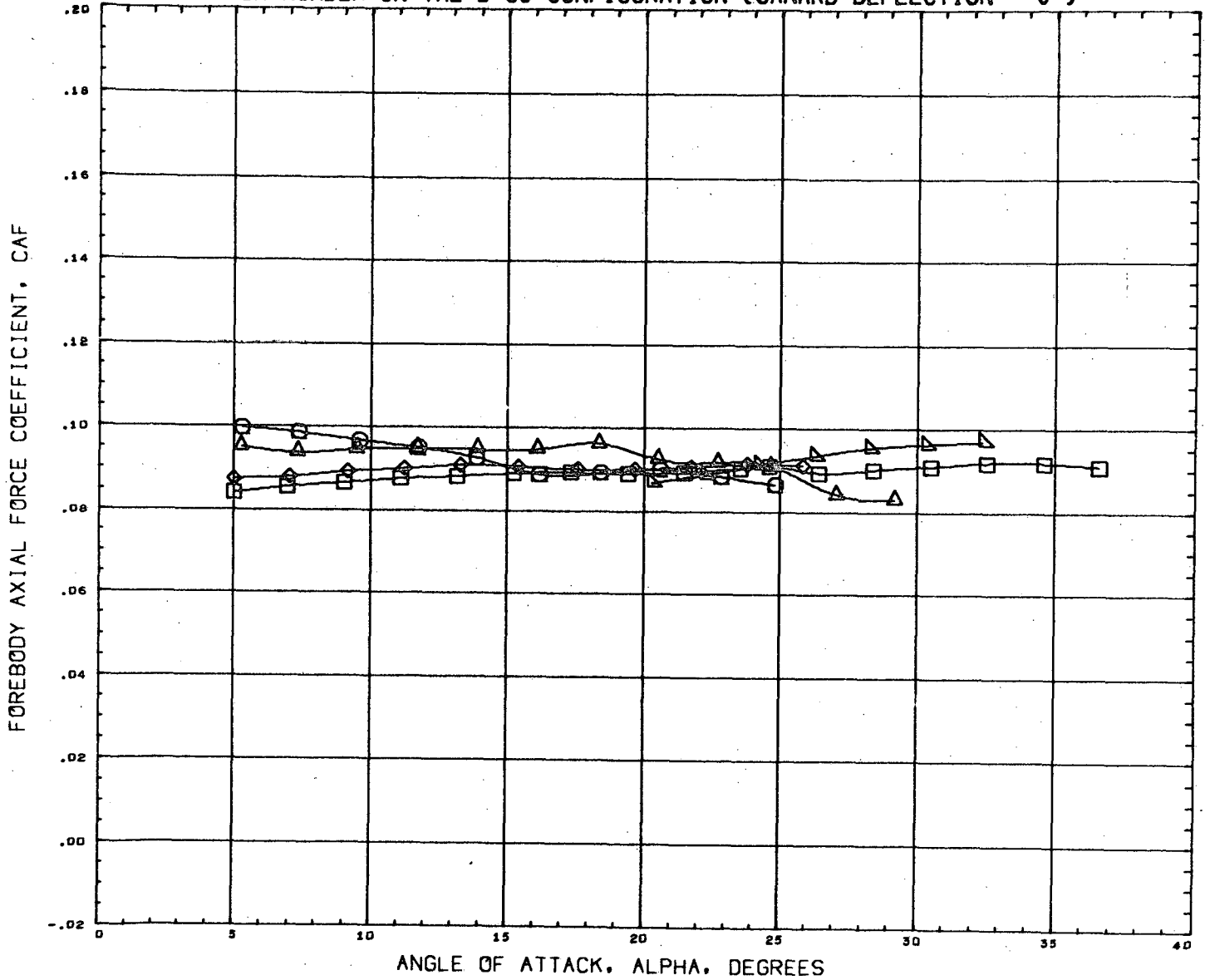
SYMBOL	MACH	PARAMETRIC VALUES			
◇	0.599	BETA	0.000	ELEVON	0.000
◇	0.899	CANARD	0.000	RUDDER	0.000
◇	0.961				
◇	1.002				
◇	1.043				
◇	1.194	DATA HIST. CODE	*E*A		

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0 (G35EA0) 22 SEP 71 PAGE 84

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OF POOR QUALITY

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = 0)



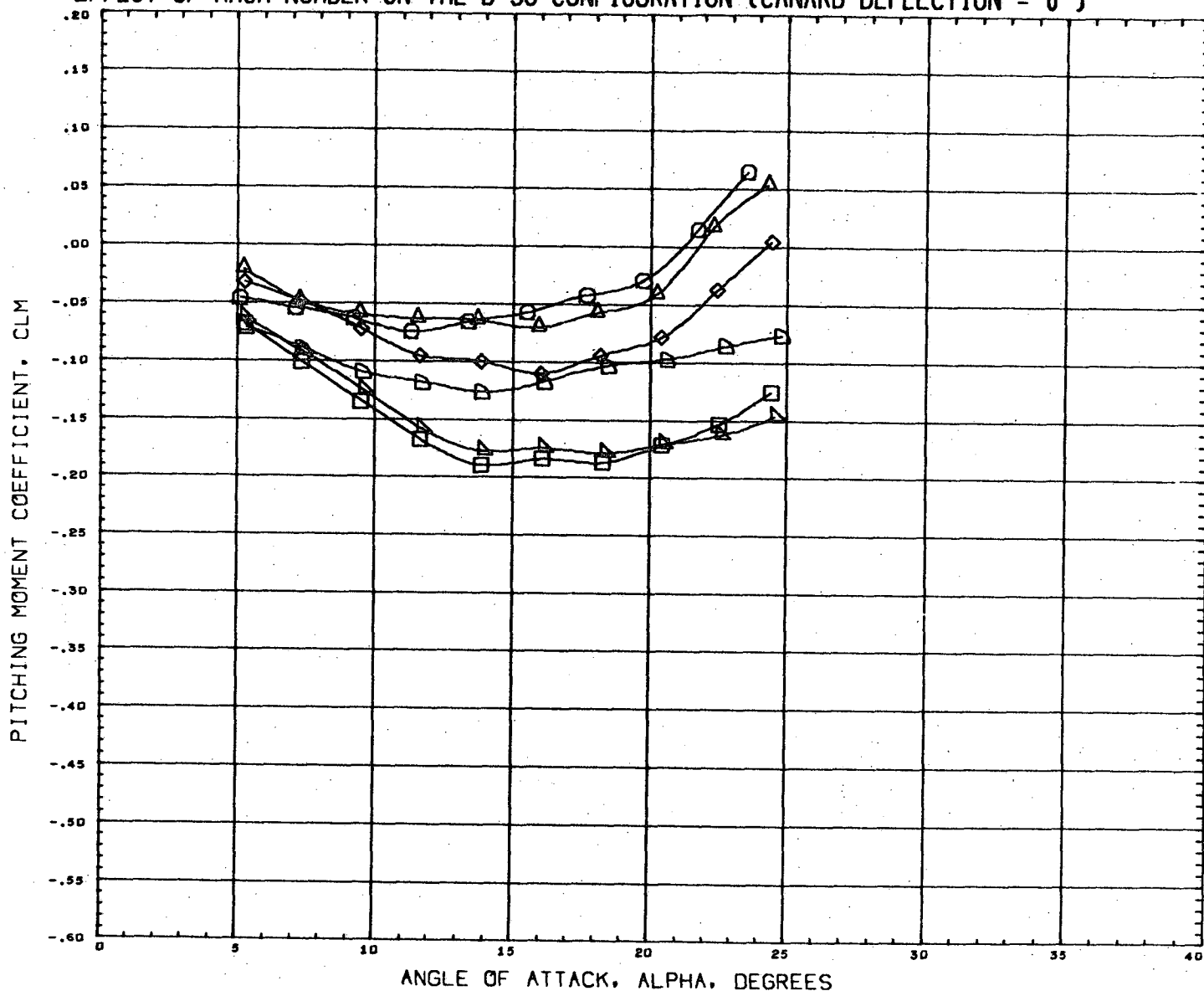
ANGLE OF ATTACK, ALPHA, DEGREES

SYMBOL	MACH	PARAMETRIC VALUES			
○	1.453	BETA	0.000	ELEVON	0.000
◇	1.953	CANARD	0.000	RUDDER	0.000
△	2.740				
□	2.990				
◇	4.450				

DATA HIST. CODE #E#A

REFERENCE INFORMATION		
SREF	14.9040	sq. in.
LREF	3.0120	in.
BREF	6.0180	in.
XMRP	7.2990	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0035	

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = 0)



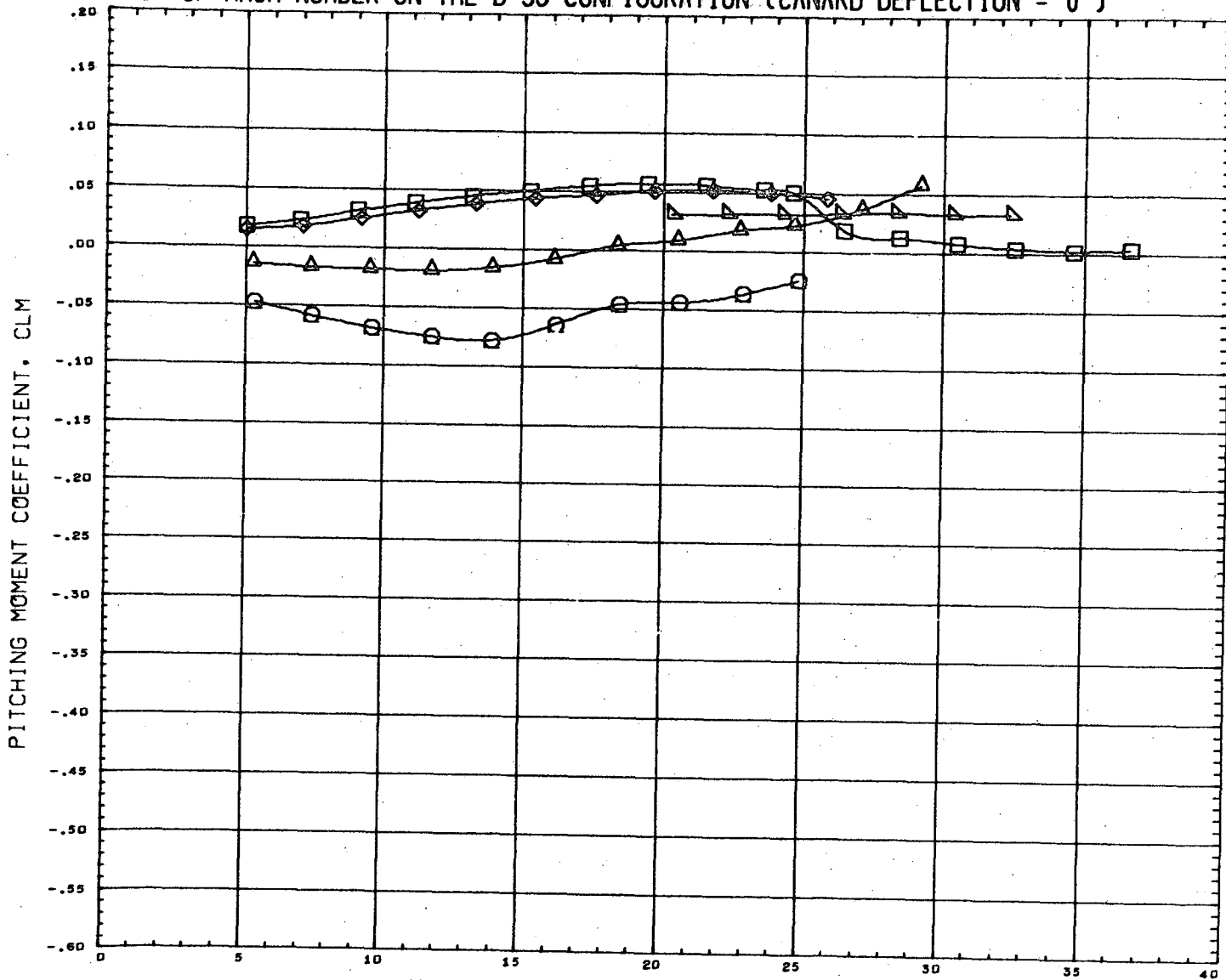
SYMBOL	MACH	PARAMETRIC VALUES			
○	0.599	BETA	0.000	ELEVON	0.000
△	0.899	CANARD	0.000	RUDDER	0.000
◇	0.961				
□	1.002				
◻	1.043				
◻	1.194				

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0 (G35EAO) 22 SEP 71 PAGE 86

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OF POOR QUALITY

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = 0)



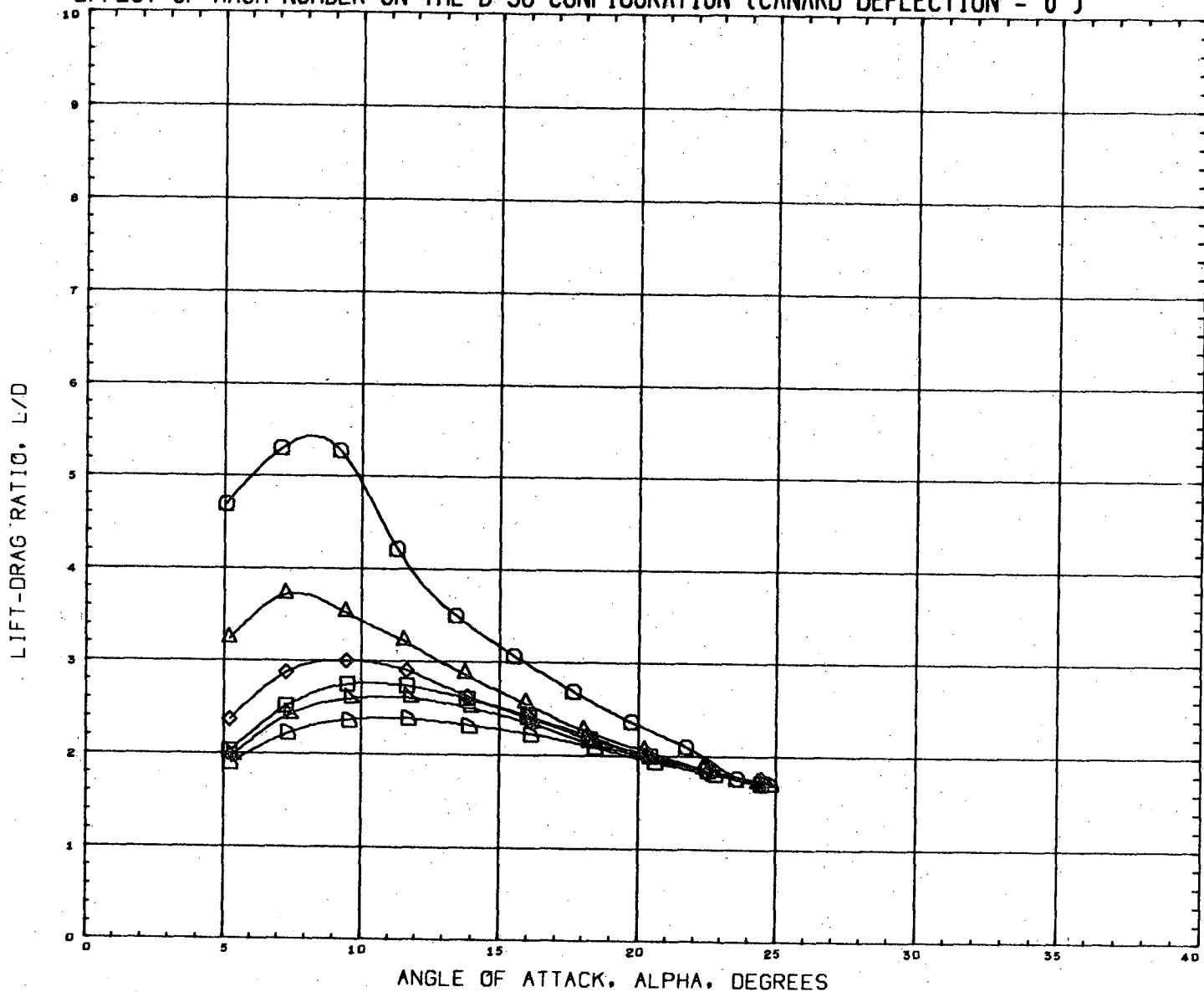
ANGLE OF ATTACK, ALPHA, DEGREES

SYMBOL	MACH	PARAMETRIC VALUES			
□	1.453	BETA	0.000	ELEVON	0.000
△	1.953	CANARD	0.000	RUDDER	0.000
◇	2.740				
○	2.990				
×	4.450				

DATA HIST. CODE *E#A

REFERENCE INFORMATION		
SREF	14.9040	50. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = 0)



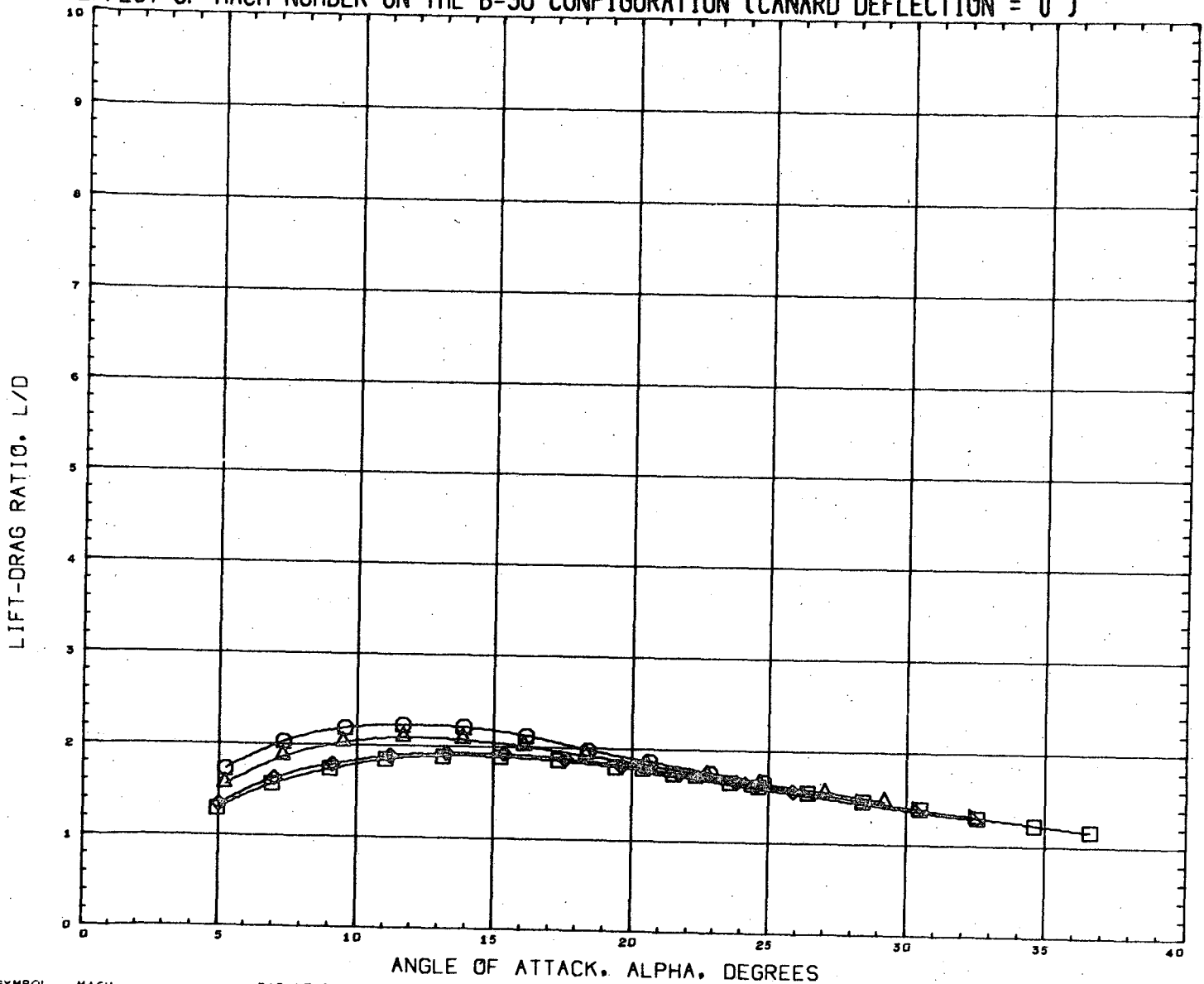
SYMBOL	MACH	PARAMETRIC VALUES			
○	0.599	BETA	0.000	ELEVON	0.000
△	0.699	CANARD	0.000	RUDDER	0.000
◇	0.961				
□	1.002				
▽	1.043				
+	1.194	DATA HIST. CODE	*E*A		

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0 (G35EA0) 22 SEP 71 PAGE 88

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OF POOR QUALITY

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = 0)

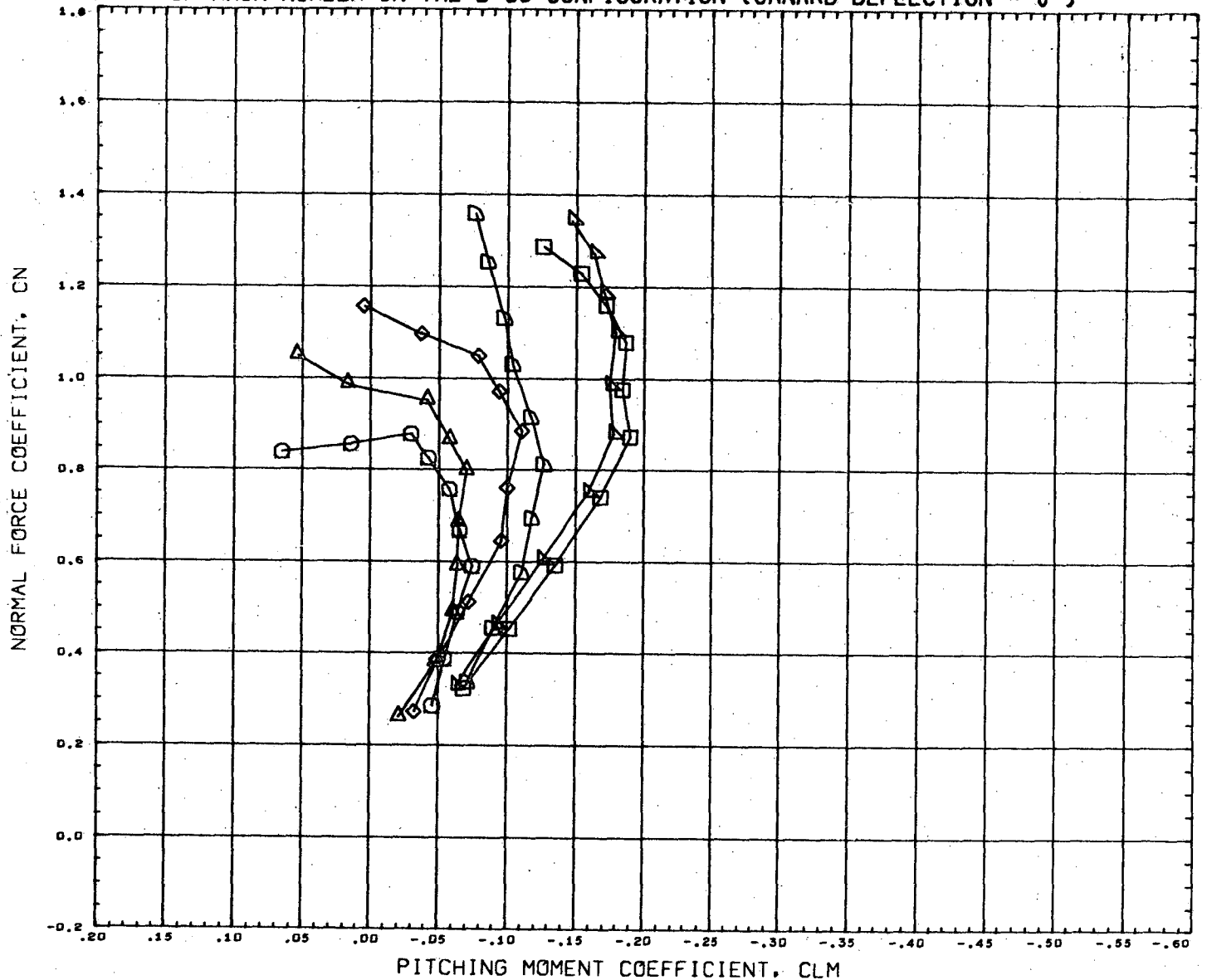


SYMBOL	MACH	PARAMETRIC VALUES			
○	1.453	BETA	0.000	ELEVON	0.000
△	1.953	CANARD	0.000	RUDDER	0.000
◇	2.740				
□	2.990				
×	4.450				

DATA HIST. CODE *E#A

REFERENCE INFORMATION		
SREF	14.9040	sq. in.
LREF	3.0120	in.
BREF	6.0180	in.
XMRP	7.2990	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0035	

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = 0)

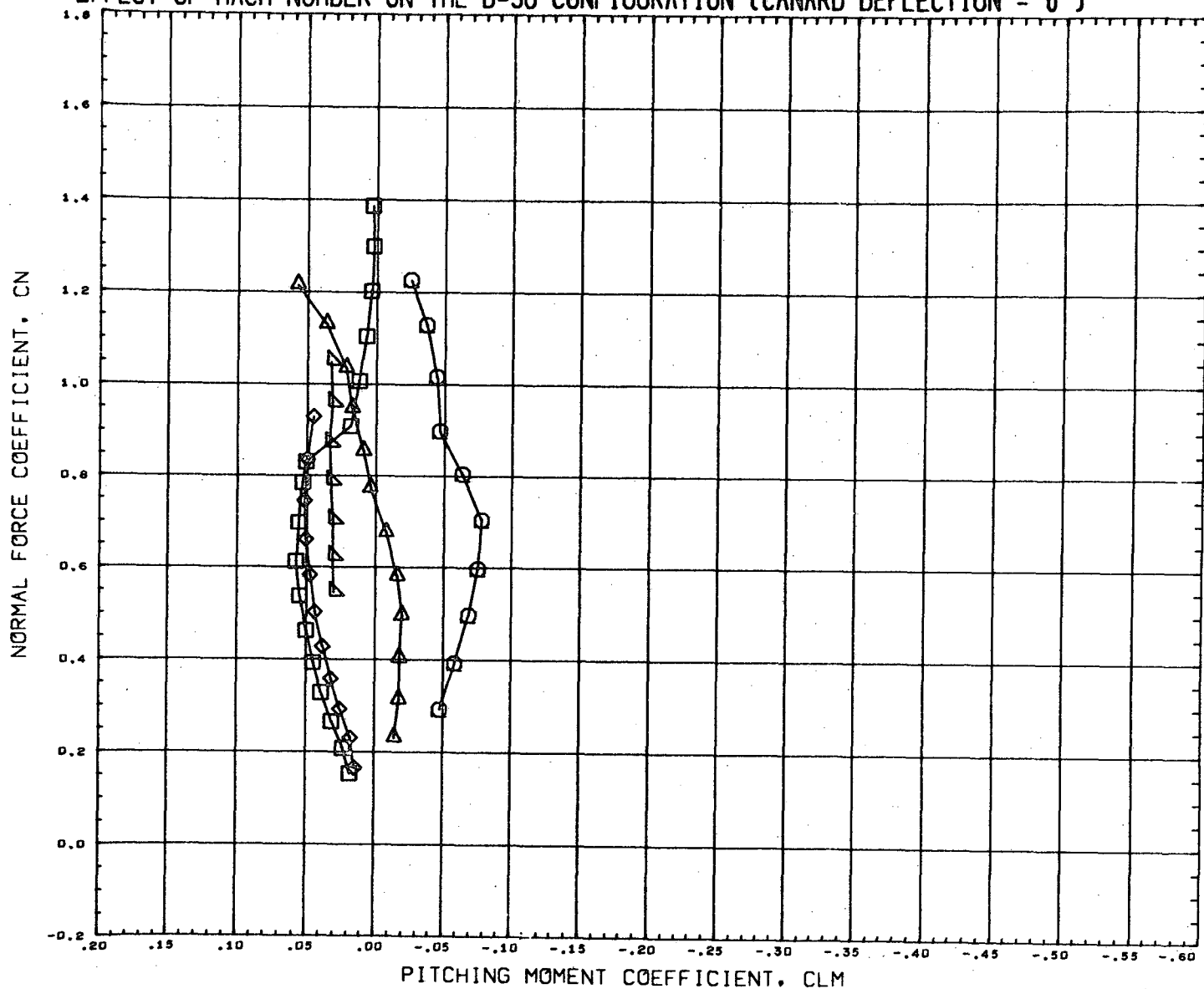


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SYMBOL	MACH	PARAMETRIC VALUES			
○	0.599	BETA	0.000	ELEVON	0.000
△	0.899	CANARD	0.000	RUDDER	0.000
□	0.961				
◇	1.002				
○	1.043				
○	1.194	DATA HIST. CODE	#E#A		

REFERENCE INFORMATION		
SREF	14.9040	50. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = 0)

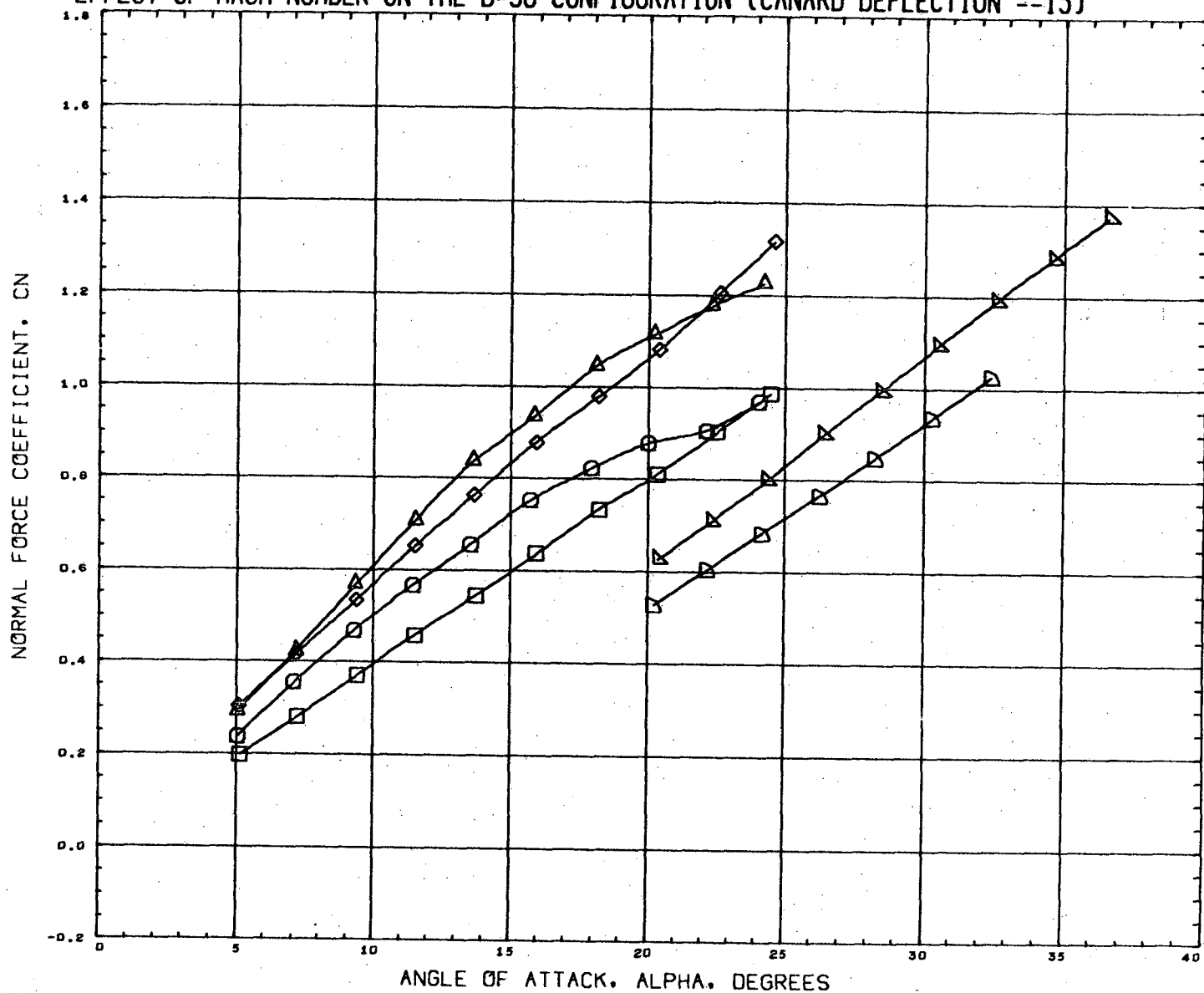


SYMBOL	MACH	PARAMETRIC VALUES			
□	1.453	BETA	0.000	ELEVON	0.000
◇	1.953	CANARD	0.000	RUDDER	0.000
△	2.740				
▽	2.990				
○	4.450				

DATA HIST. CODE *E#A

REFERENCE INFORMATION		
SREF	14.9040	SQ.IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = -15)



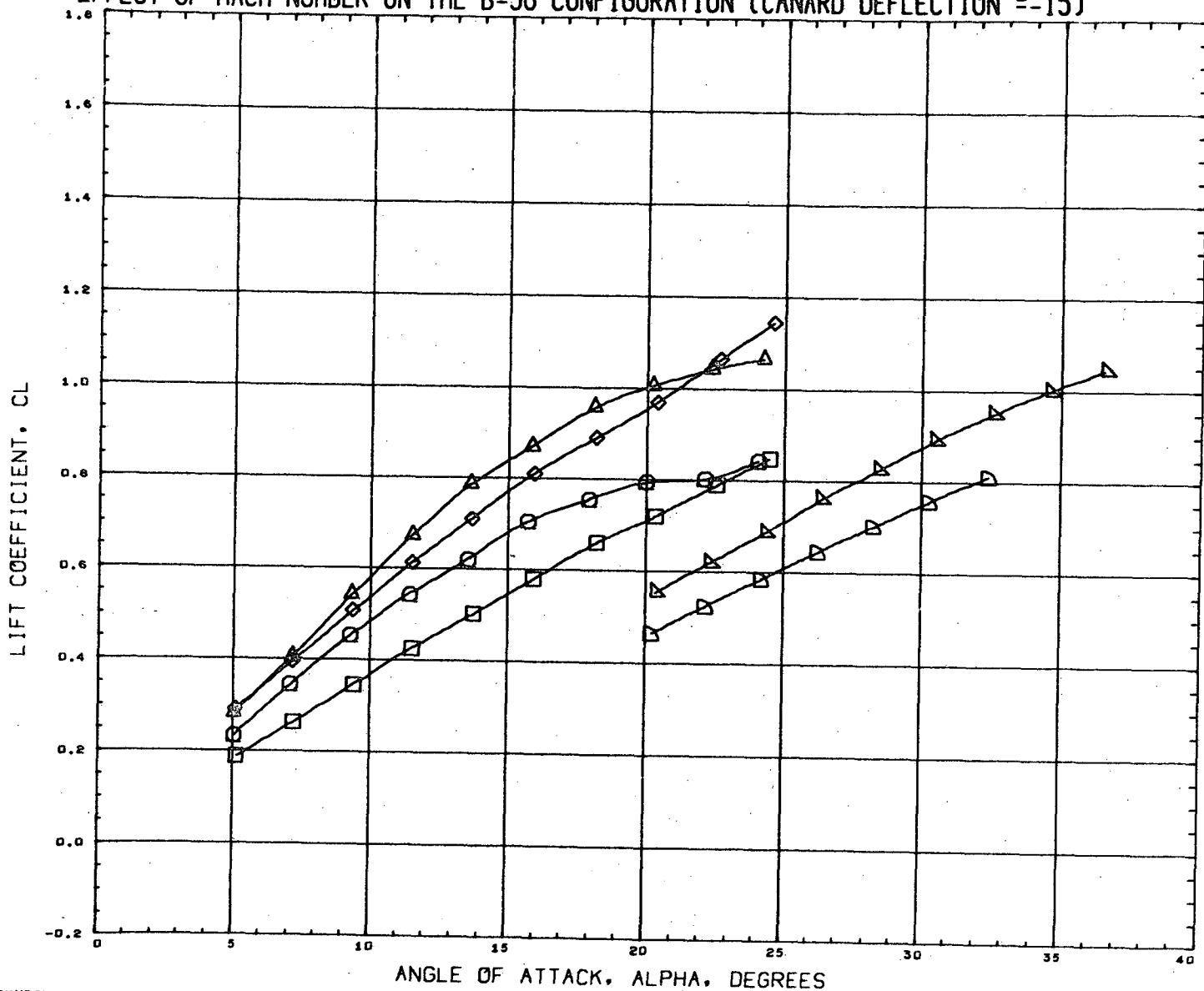
SYMBOL	MACH	PARAMETRIC VALUES			
○	0.899	BETA	0.000	ELEVON	0.000
△	0.998	CANARD	-15.000	RUDDER	0.000
◇	1.189				
◊	1.956				
◻	2.990				
◼	4.450				
		DATA HIST. CODE	*E+A		

REFERENCE INFORMATION		
SREF	14.9040	sq. in.
LREF	3.0120	in.
BREF	6.0180	in.
XMRP	7.2990	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0035	

MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0 (E35CCA) 22 SEP 71 PAGE 92

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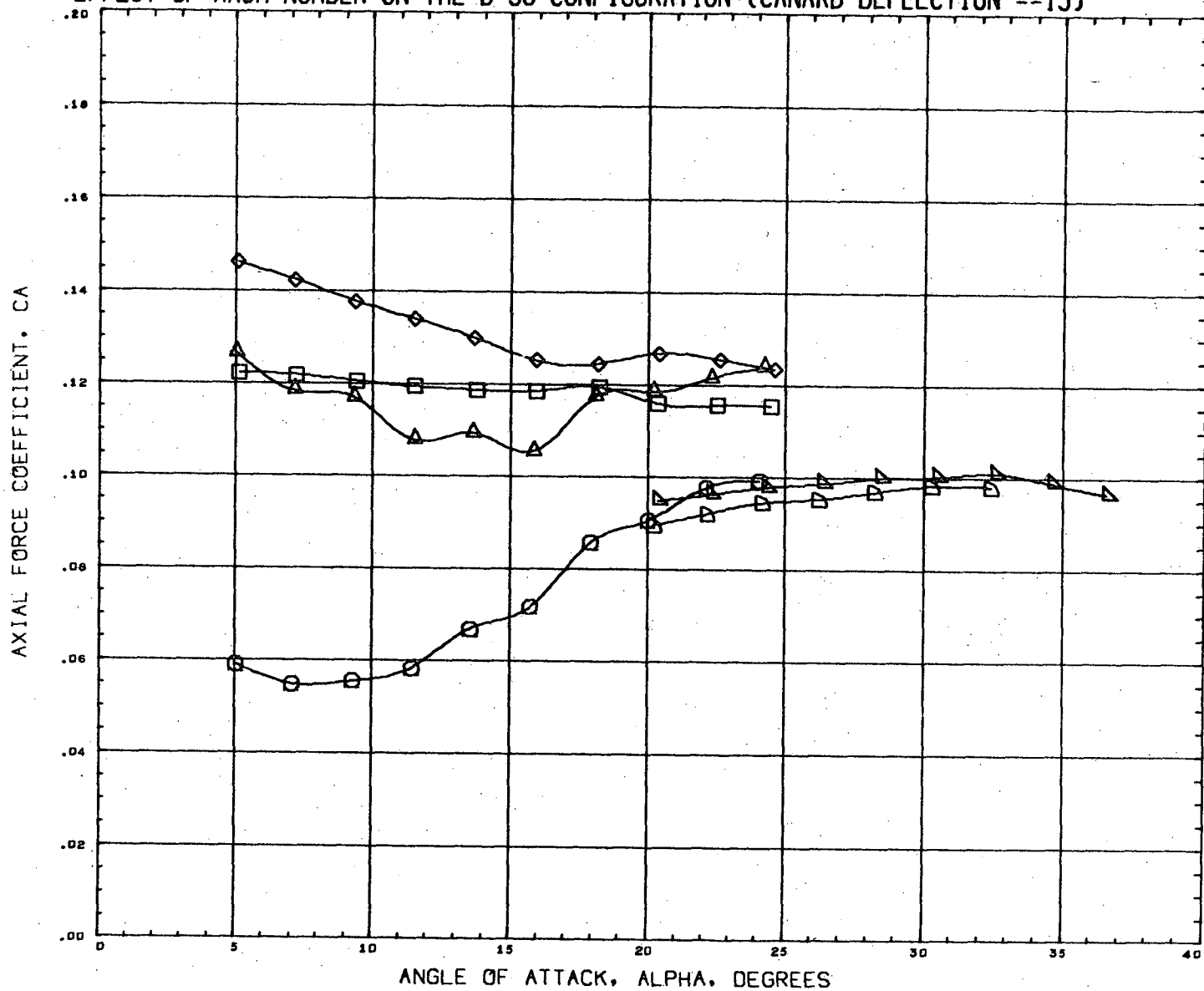
EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = -15)



SYMBOL	MACH	PARAMETRIC VALUES			
○	0.899	BETA	0.000	ELEVON	0.000
△	0.998	CANARD	-15.000	RUDDER	0.000
◇	1.189				
□	1.956				
▽	2.990				
◇	4.450	DATA HIST. CODE	*E#A		

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = -15)

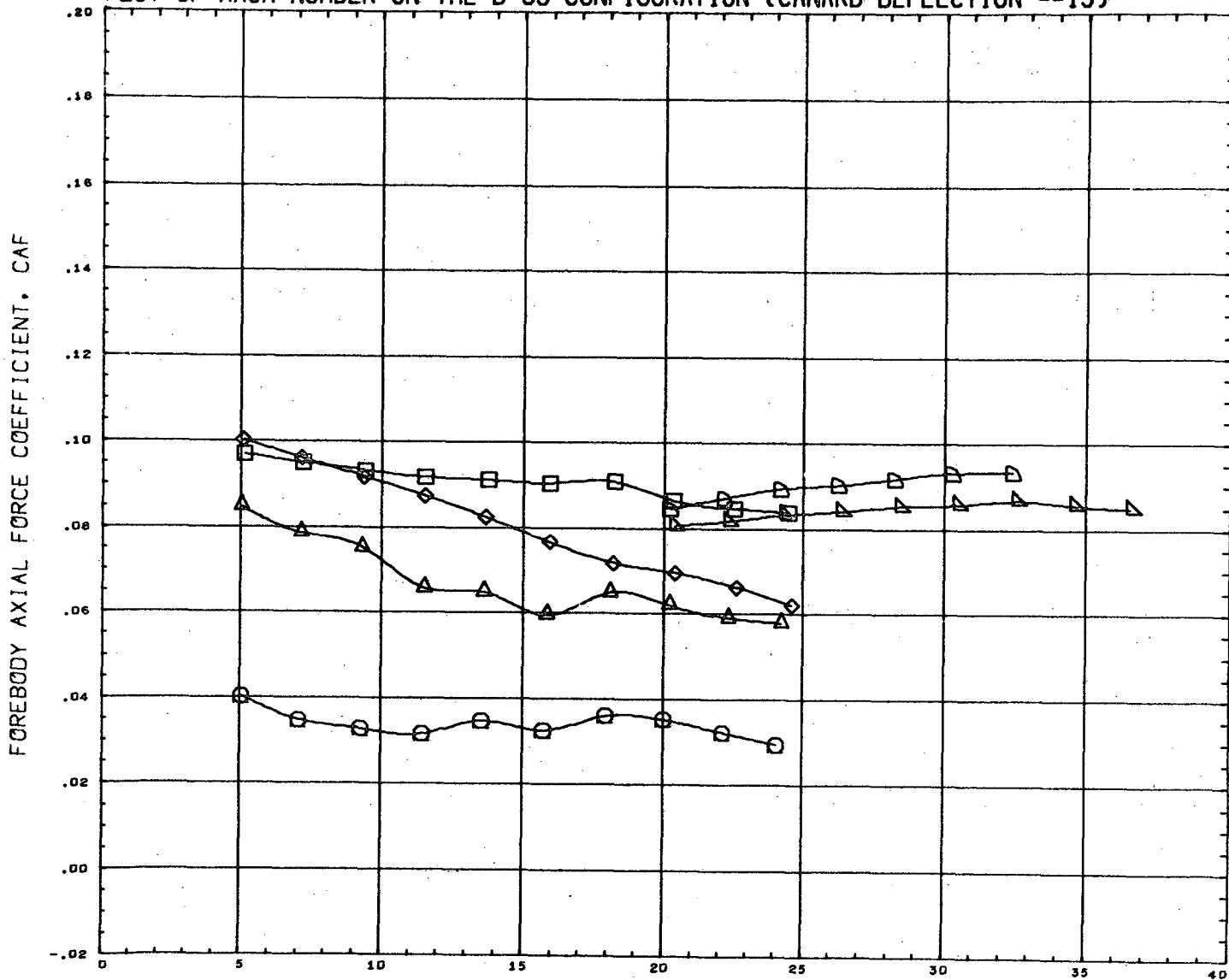


SYMBOL	MACH	PARAMETRIC VALUES			
○	0.899	BETA	0.000	ELEVON	0.000
△	0.998	CANARD	-15.000	RUDDER	0.000
◇	1.189				
□	1.956				
◇	2.990				
◇	4.450	DATA HIST. CODE	*E#A		

REFERENCE INFORMATION		
SREF	14.9040	59. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

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EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = -15)

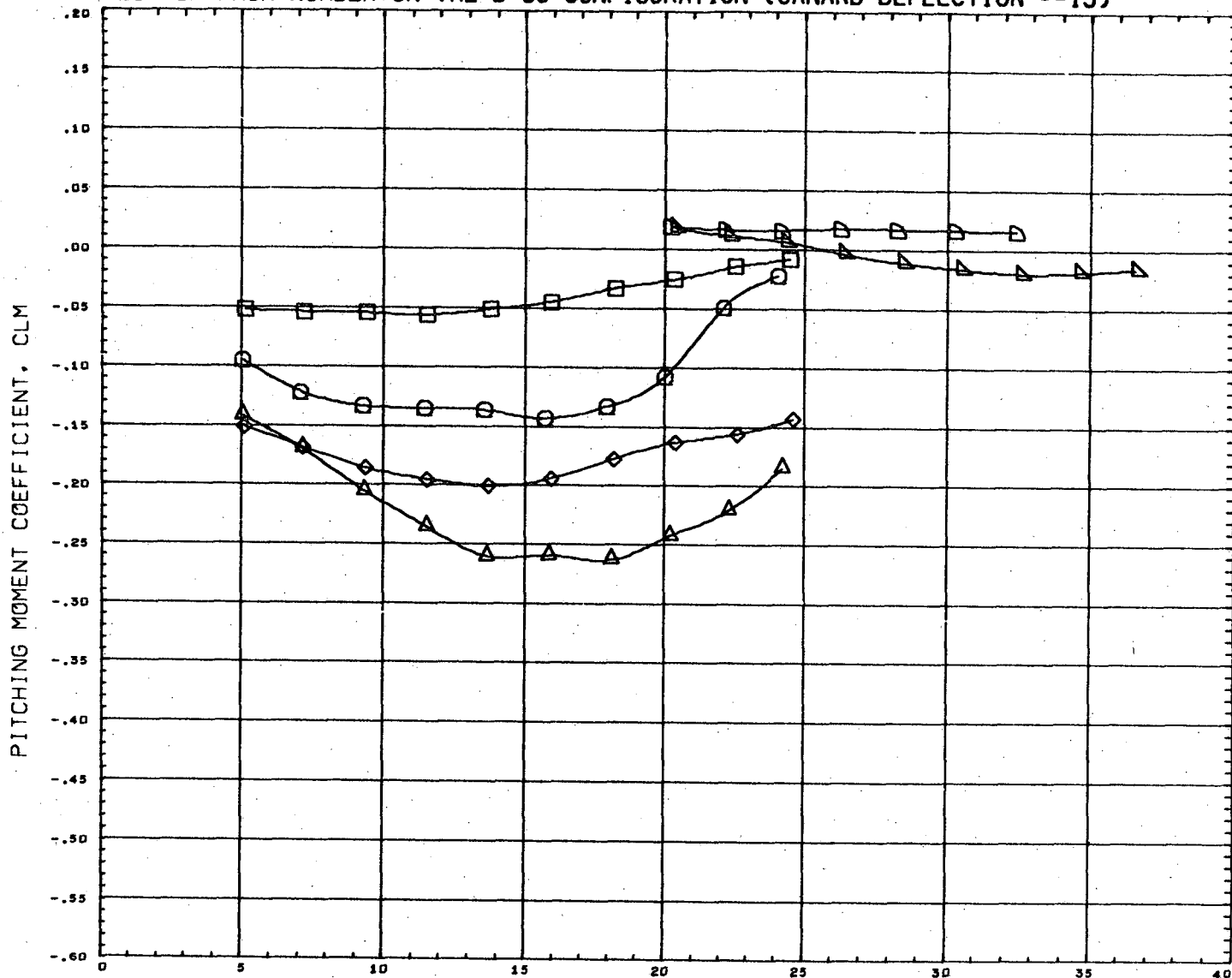


ANGLE OF ATTACK, ALPHA, DEGREES

SYMBOL	MACH	PARAMETRIC VALUES			
□	0.899	BETA	0.000	ELEVON	0.000
◇	0.998	CANARD	-15.000	RUDDER	0.000
△	1.189				
▽	1.956				
○	2.990				
◇	4.450	DATA HIST. CODE	*E*A		

REFERENCE INFORMATION		
SREF	14.9040	90 IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = -15)



ANGLE OF ATTACK, ALPHA, DEGREES

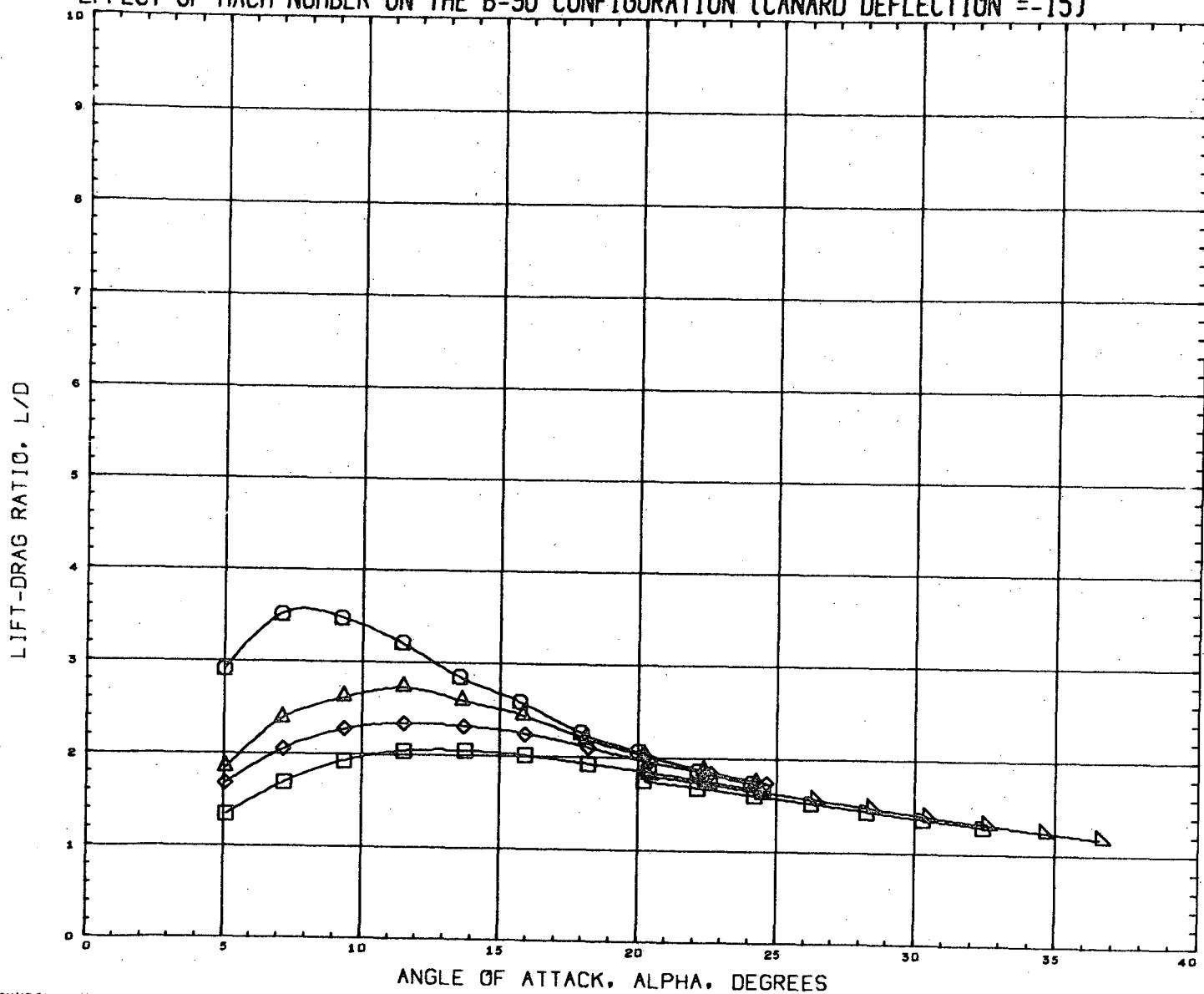
SYMBOL	MACH	PARAMETRIC VALUES			
○	0.899	BETA	0.000	ELEVON	0.000
◇	0.998	CANARD	-15.000	RUDDER	0.000
△	1.189				
□	1.956				
▽	2.990				
◇	4.450	DATA HIST. CODE	#E#A		

REFERENCE INFORMATION		
SREF	14.9040	50. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0 (E35CCA) 22 SEP 71 PAGE 96

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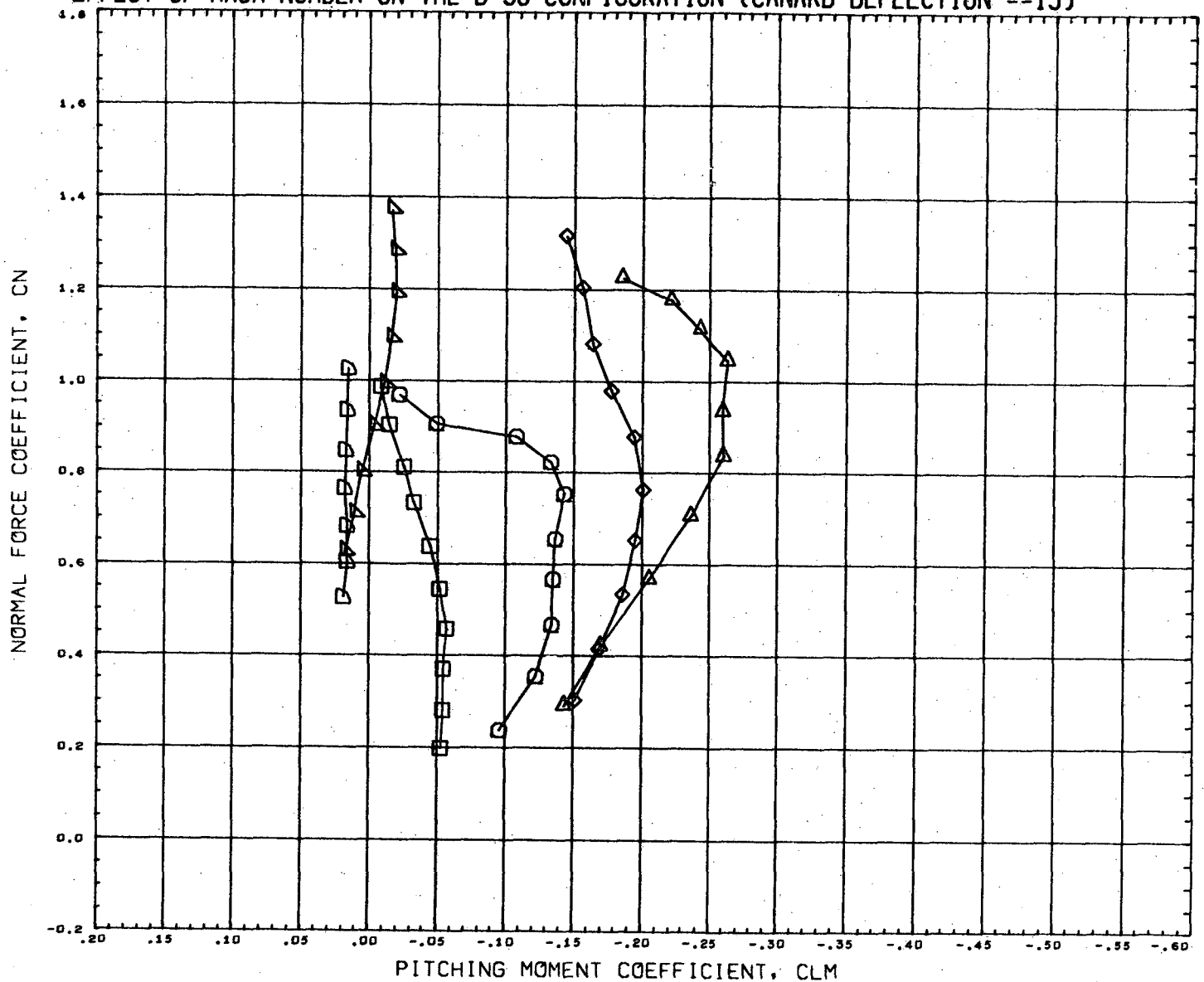
EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = -15)



SYMBOL	MACH	PARAMETRIC VALUES			
○	0.899	BETA	0.000	ELEVON	0.000
◇	0.998	CANARD	- 15.000	RUDDER	0.000
△	1.189				
□	1.956				
◇	2.990				
◇	4.450	DATA HIST. CODE	*E#A		

REFERENCE INFORMATION		
SREF	14.9040	50. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

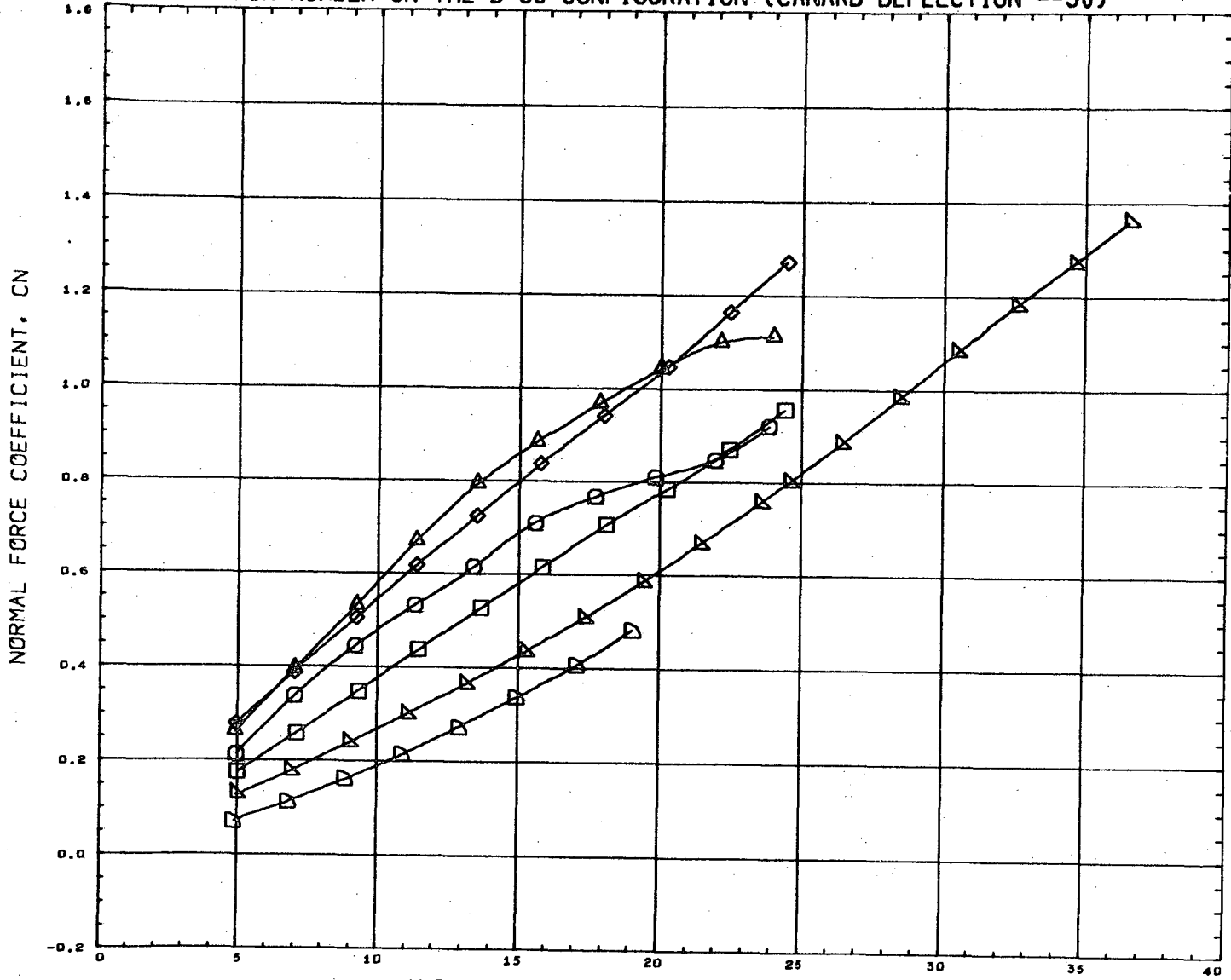
EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION $= -15$)



SYMBOL	MACH	PARAMETRIC VALUES		
	0.899	BETA	0.000	ELEVON 0.000
	0.998	CANARD	-15.000	RUDDER 0.000
	1.189			
	1.956			
	2.990			
4.450	DATA HIST. CODE *E#A			

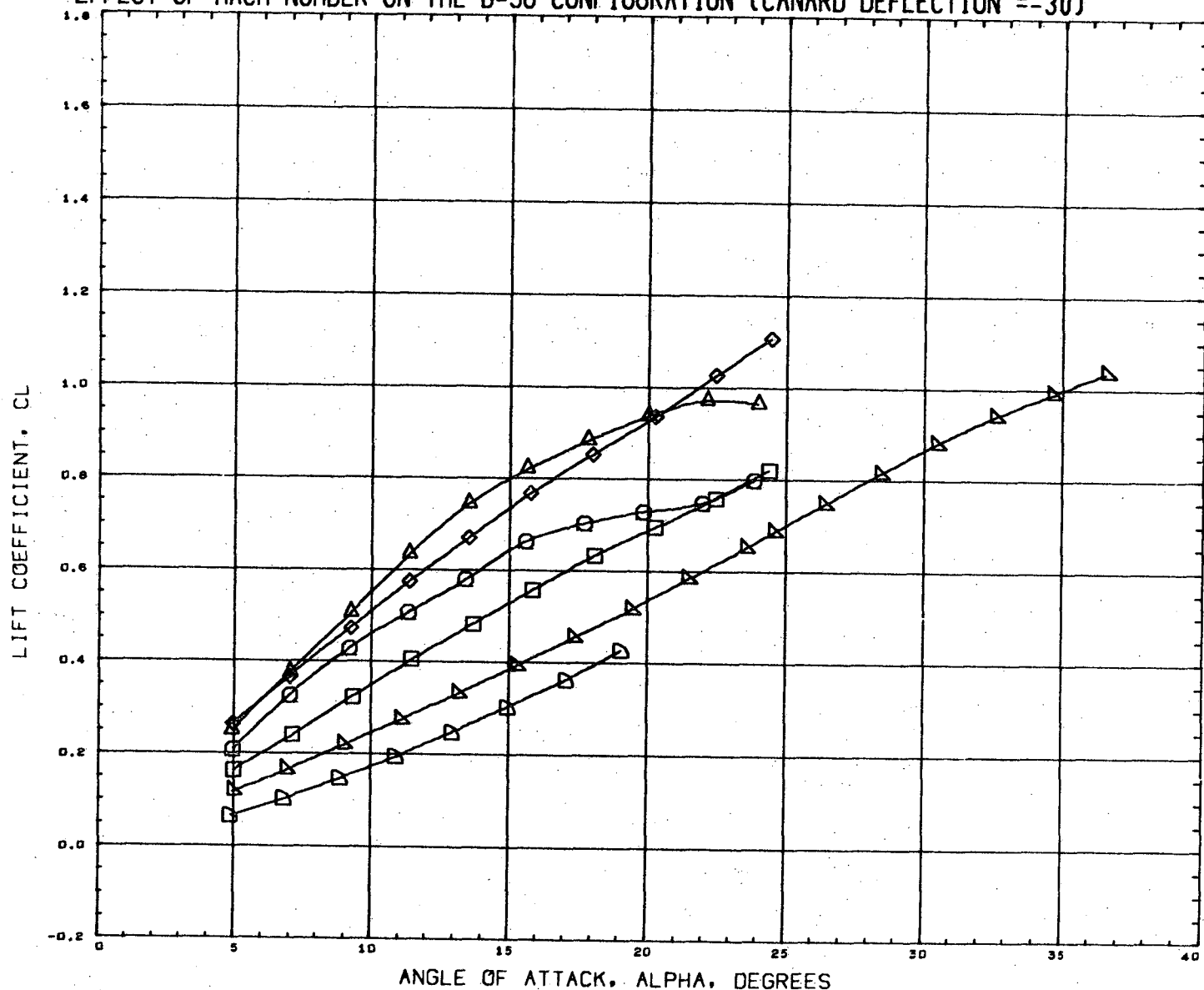
REFERENCE INFORMATION		
SREF	14.9040	50. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	IN.

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = -30)



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.897	BETA	0.000	ELEVON	0.000	SREF	14.9040	SQ. IN.
△	0.994	CANARD	-30.000	RUDDER	0.000	LREF	3.0120	IN.
◇	1.193					BREF	6.0180	IN.
□	1.960					XMRP	7.2990	IN.
▽	2.990					YMRP	0.0000	IN.
◇	4.960					ZMRP	0.0000	IN.
		DATA HIST. CODE	#E#A			SCALE	0.0035	

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = -30)



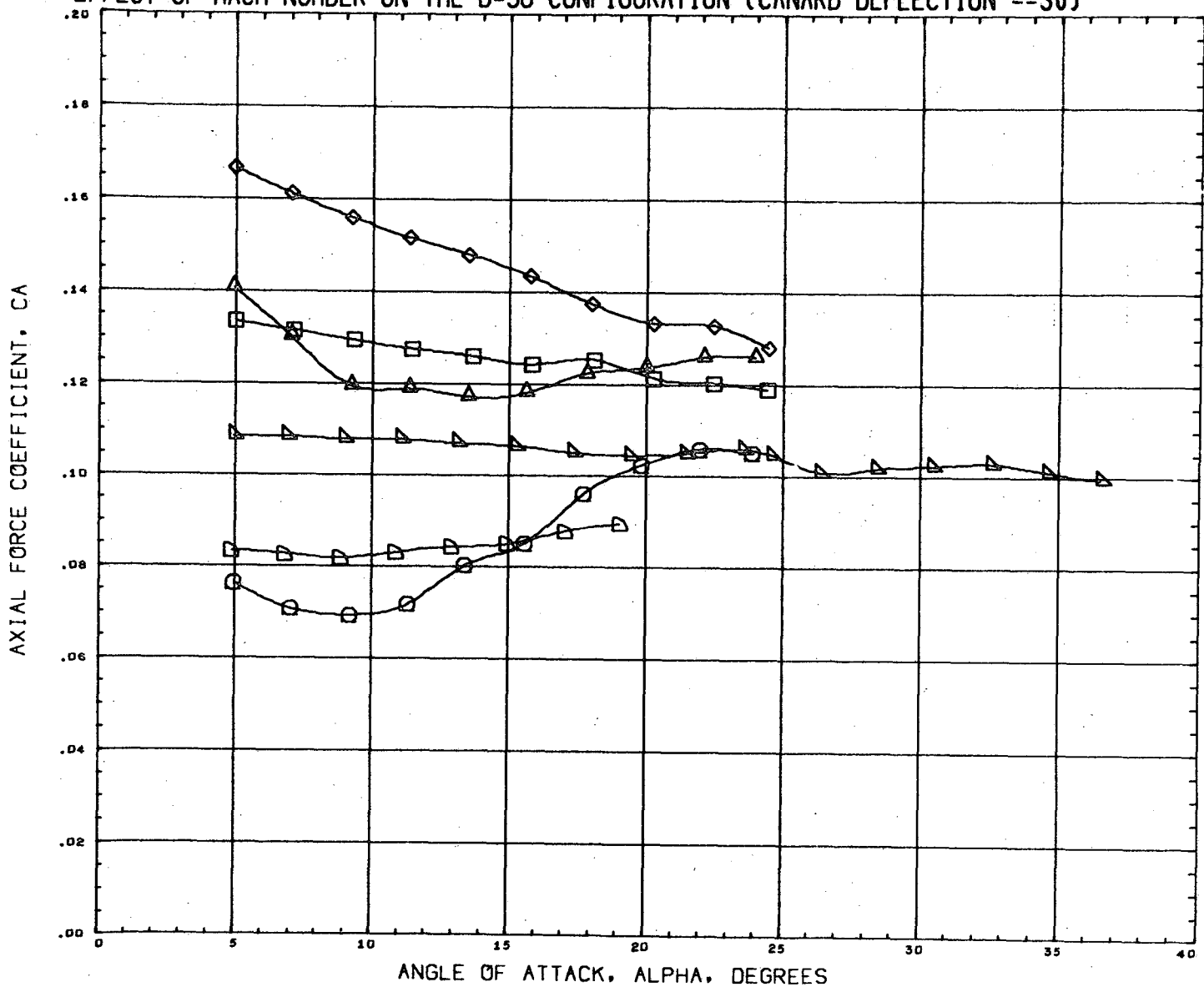
SYMBOL	MACH	PARAMETRIC VALUES			
◇	0.897	BETA	0.000	ELEVON	0.000
◇	0.994	CANARD	- 30.000	RUDDER	0.000
◇	1.193				
◇	1.960				
◇	2.990				
◇	4.960	DATA HIST. CODE	*E#A		

REFERENCE INFORMATION		
SREF	14.9040	59. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0 (E35CCB) 22 SEP 71 PAGE 100

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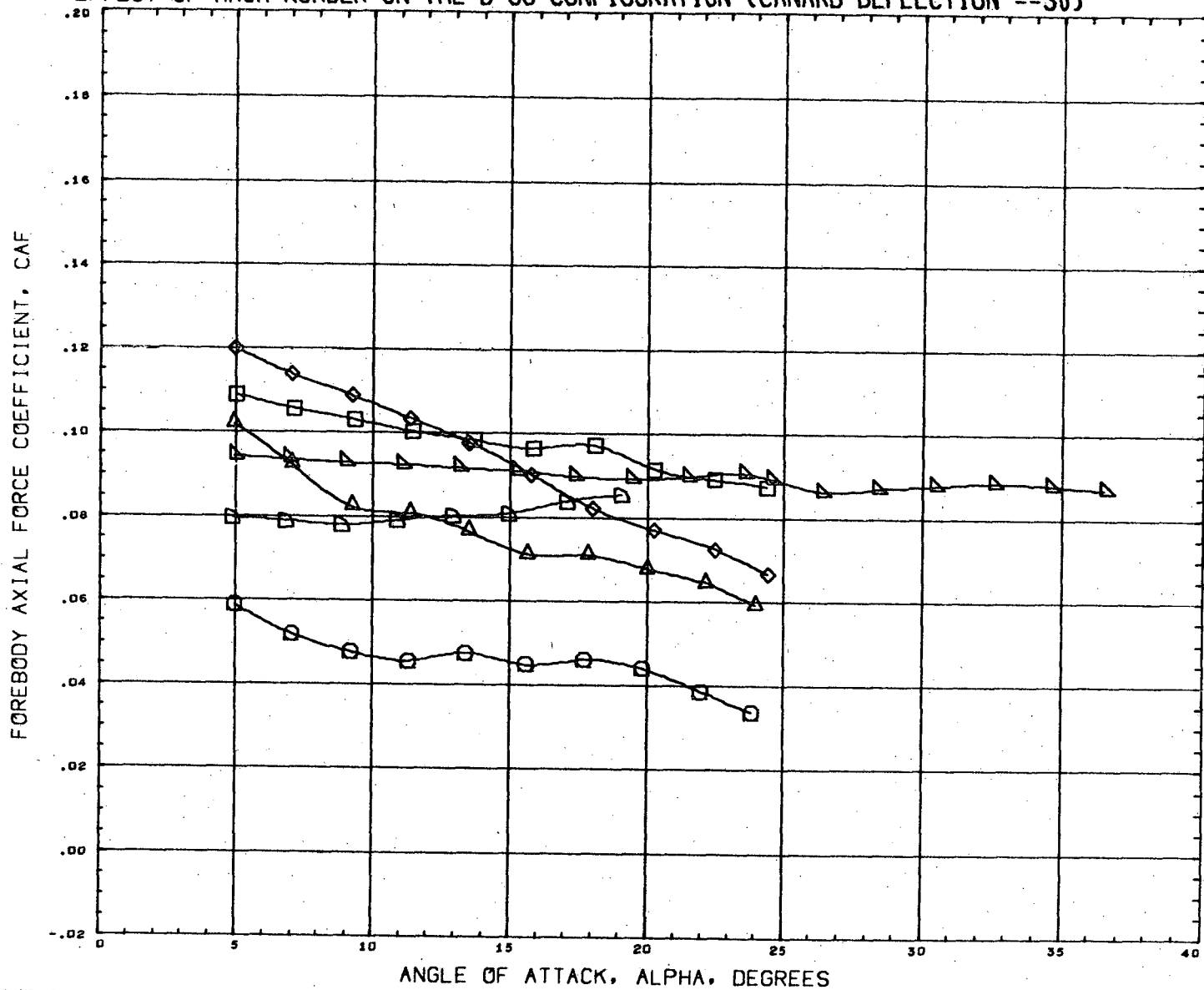
EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = -30)



SYMBOL	MACH	PARAMETRIC VALUES			
◇	0.897	BETA	0.000	ELEVON	0.000
□	0.994	CANARD	-30.000	RUDDER	0.000
△	1.193				
▽	1.960				
◇	2.990				
◇	4.960				
		DATA HIST. CODE	#E#A		

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = -30)



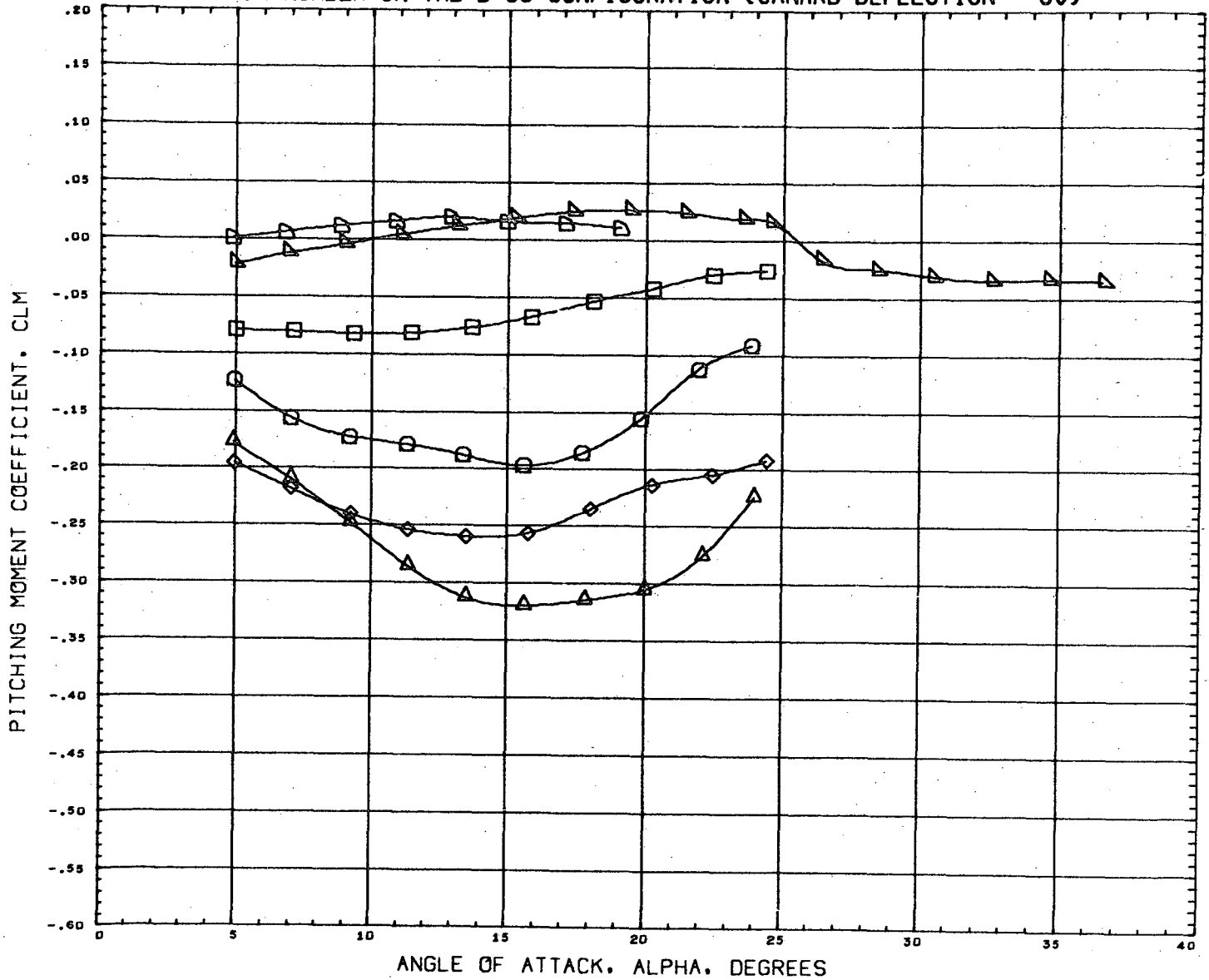
SYMBOL	MACH	PARAMETRIC VALUES			
○	0.897	BETA	0.000	ELEVON	0.000
□	0.994	CANARD	- 30.000	RUDDER	0.000
△	1.193				
◇	1.960				
▽	2.990				
◻	4.960				
		DATA HIST. CODE	#E#A		

REFERENCE INFORMATION		
SREF	14.9040	sq. in.
LREF	3.0120	in.
BREF	6.0180	in.
XMRP	7.2990	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0035	

MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0 (E35CCB) 22 SEP 71 PAGE 102

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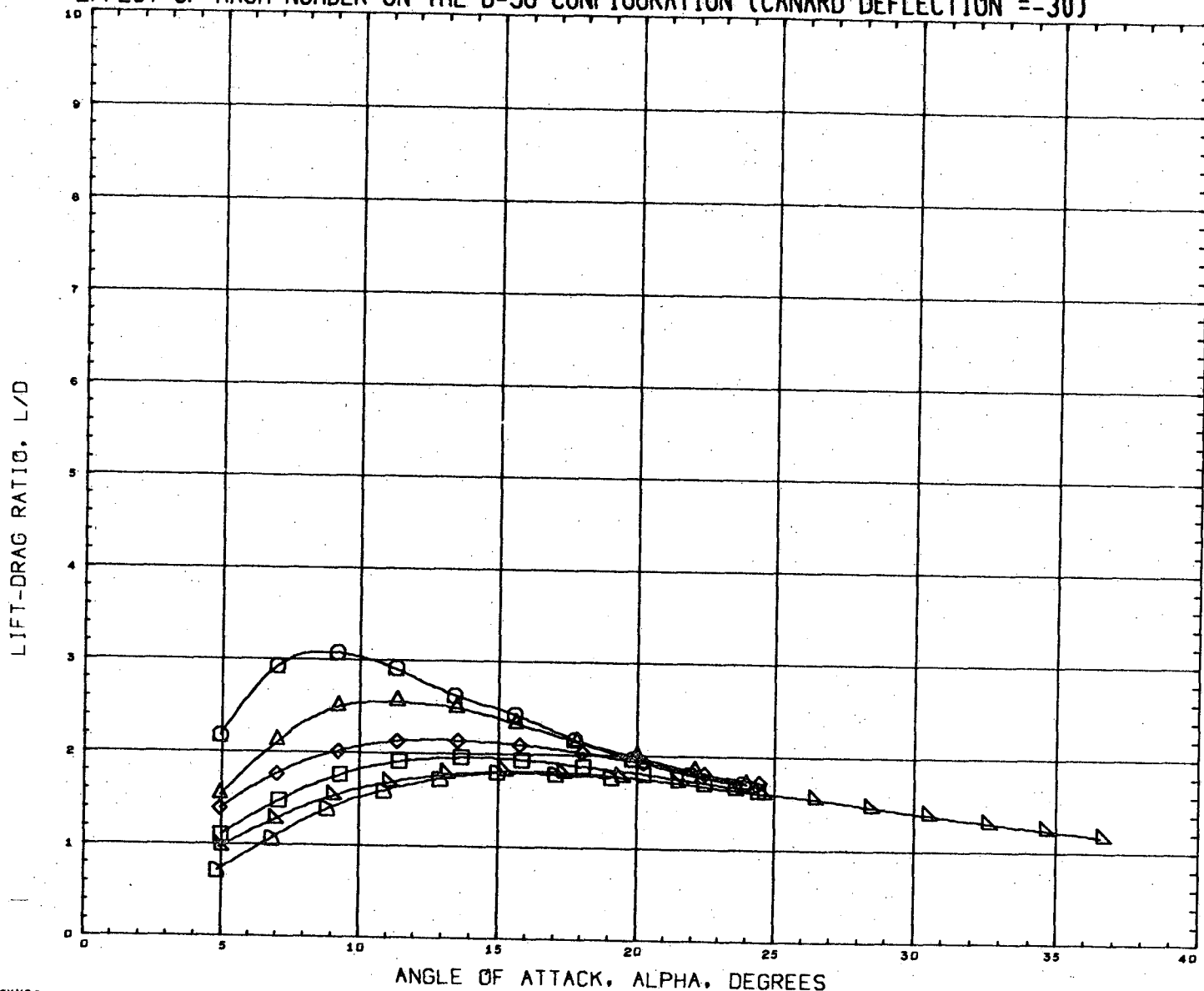
EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = -30)



SYMBOL	MACH	PARAMETRIC VALUES			
◇	0.897	BETA	0.000	ELEVON	0.000
◇	0.994	CANARD	-30.000	RUDDER	0.000
◇	1.193				
◇	1.960				
◇	2.990				
◇	4.960	DATA HIST. CODE	#E#A		

REFERENCE INFORMATION		
SREF	14.9040	50 IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = -30)



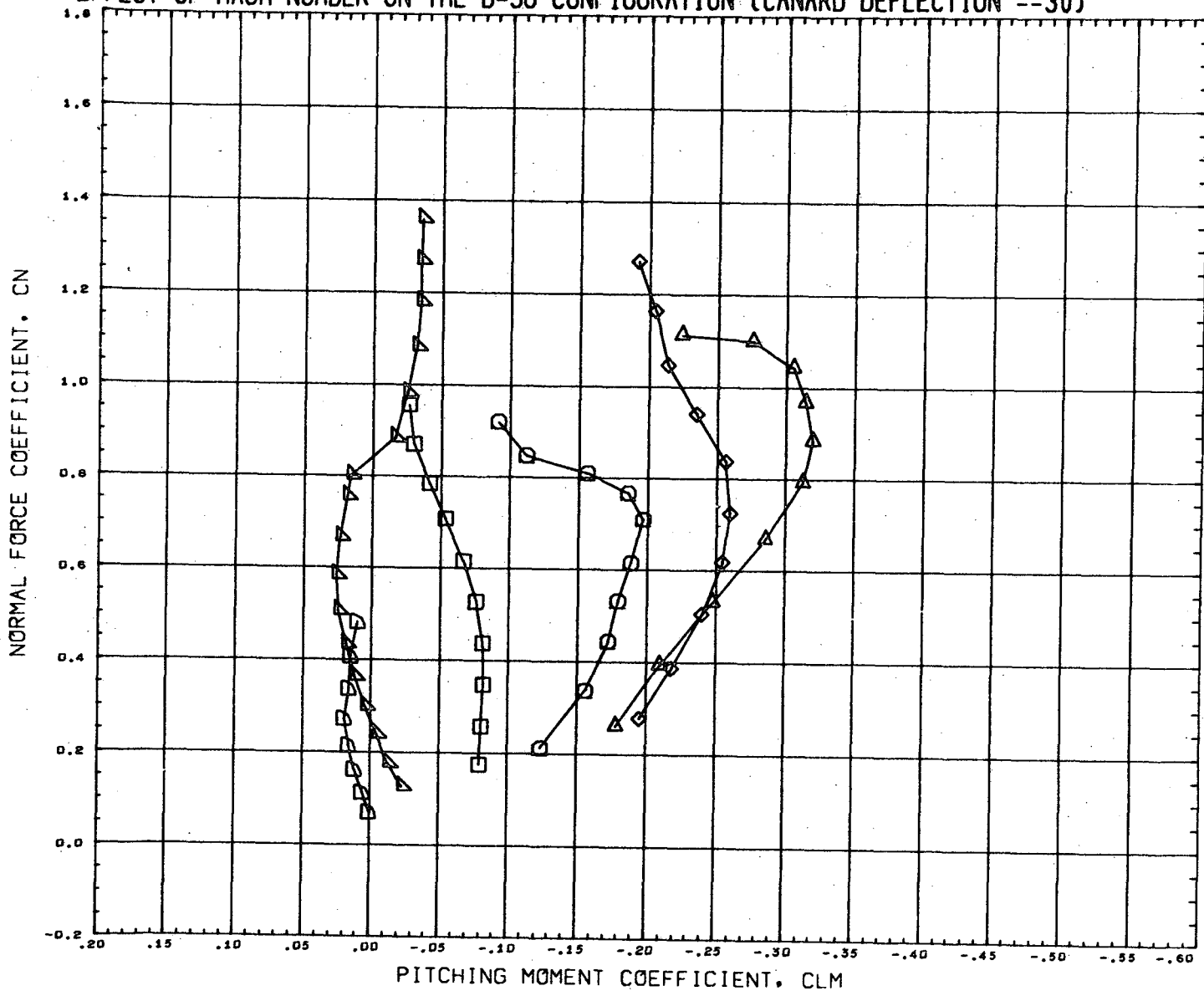
SYMBOL	MACH	PARAMETRIC VALUES			
○	0.897	BETA	0.000	ELEVON	0.000
◇	0.994	CANARD	-30.000	RUDDER	0.000
△	1.193				
□	1.960				
▽	2.990				
◇	4.960	DATA HIST. CODE	*E*A		

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0 (E35CCB) 22 SEP. 71 PAGE 104

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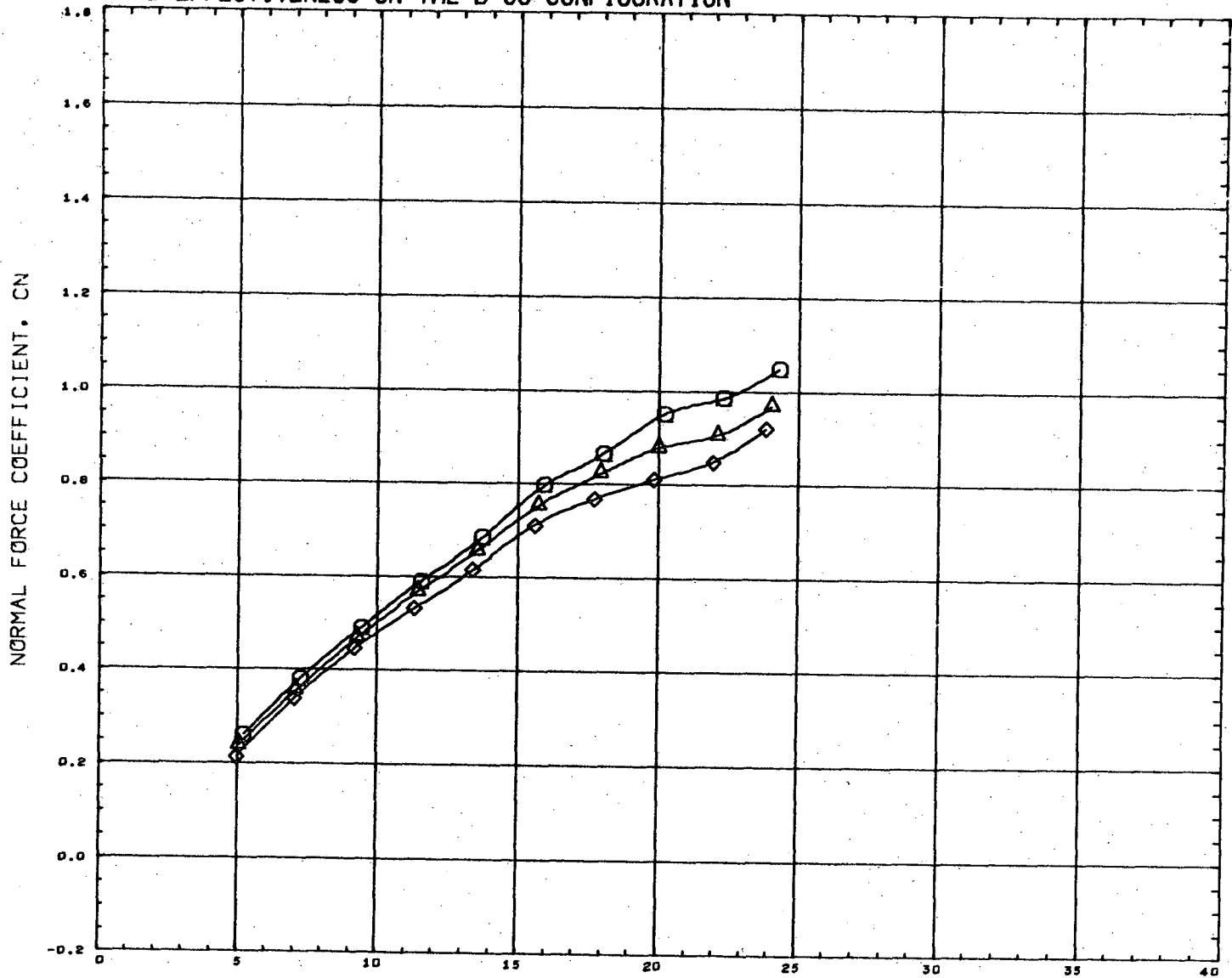
EFFECT OF MACH NUMBER ON THE B-9U CONFIGURATION (CANARD DEFLECTION = -30)



SYMBOL	MACH	PARAMETRIC VALUES			
◇	0.897	BETA	0.000	ELEVON	0.000
◇	0.994	CANARD	-30.000	RUDDER	0.000
◇	1.193				
◇	1.960				
◇	2.990				
◇	4.960	DATA HIST. CODE	*E#A		

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

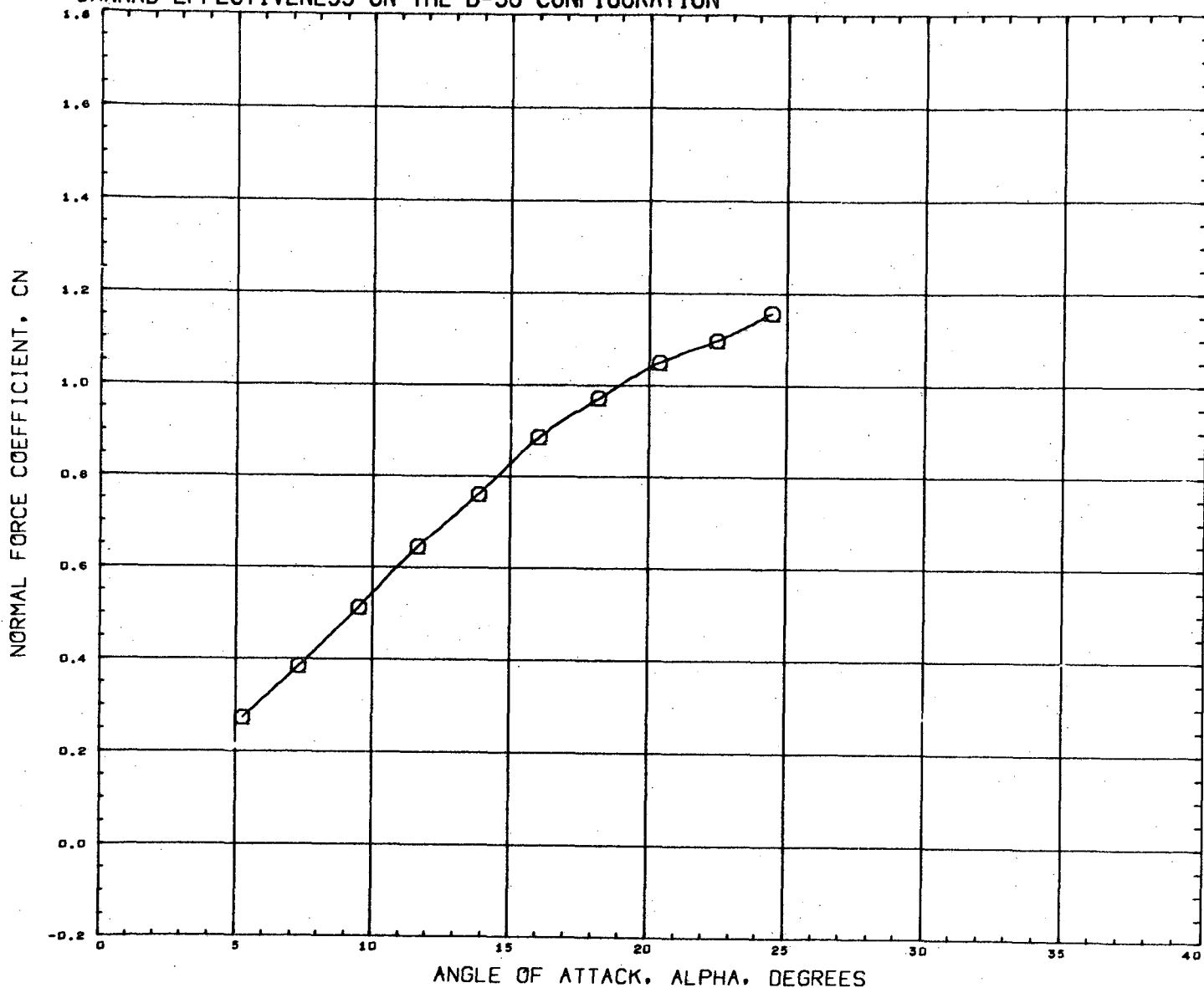
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(J35EAO)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(D35CAA)	△	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(E35CAB)	◇	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
							XMRP 7.2990 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0035

MACH 0.899

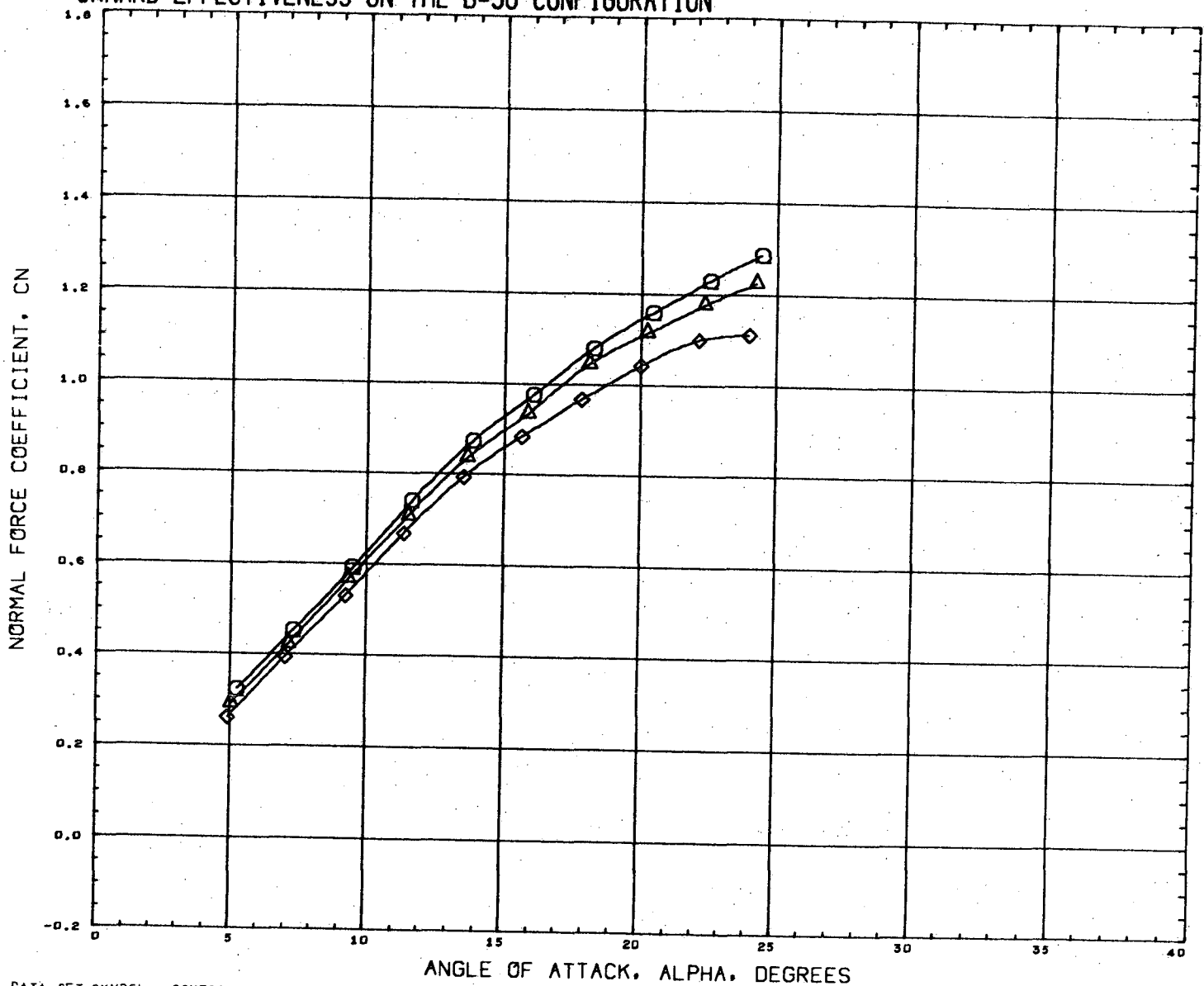
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(D35CAA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(E35CAB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 0.961

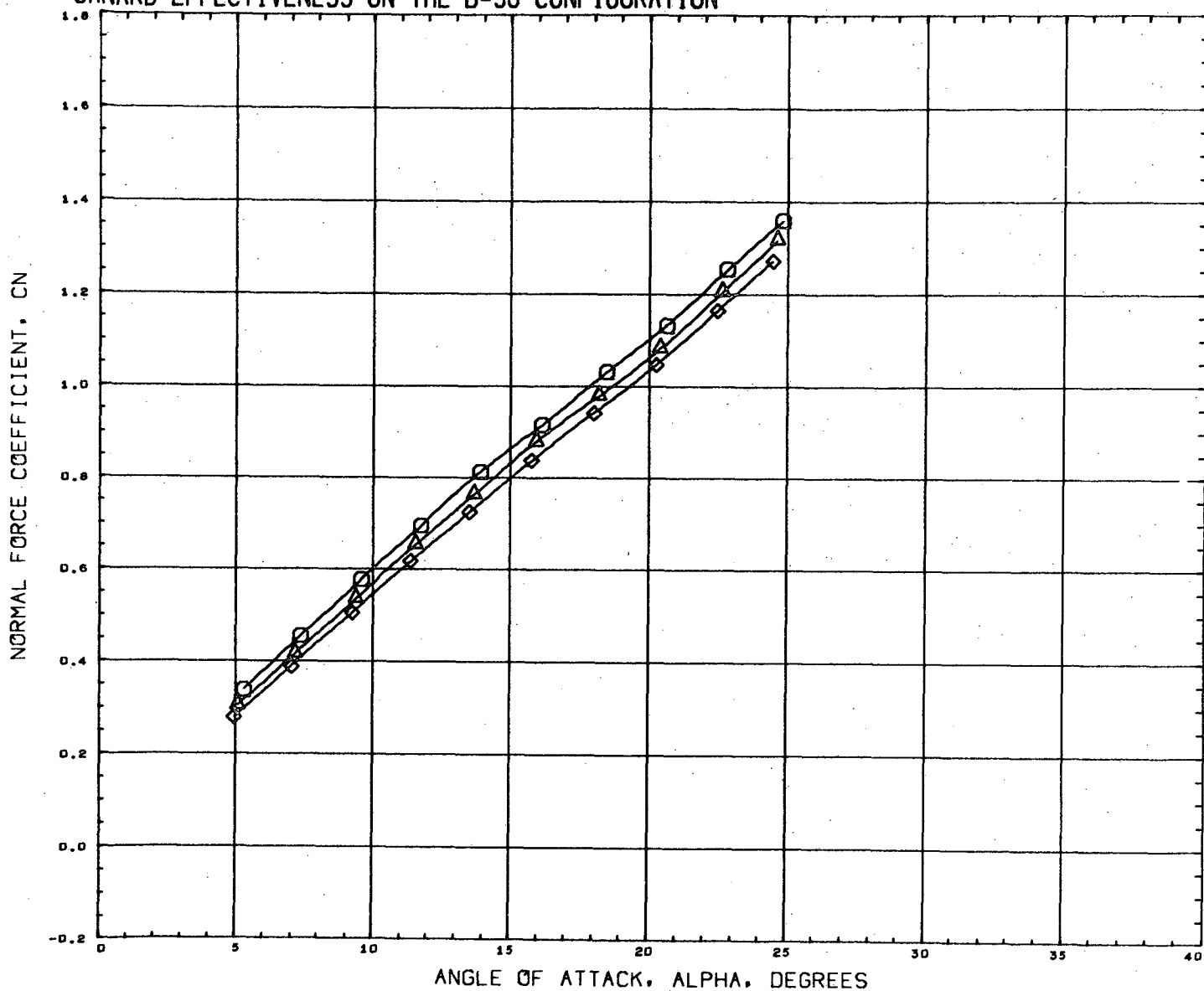
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION		
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040	SQ. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120	IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0180	IN.
						XMRP	7.2990	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0035	

MACH 1.002

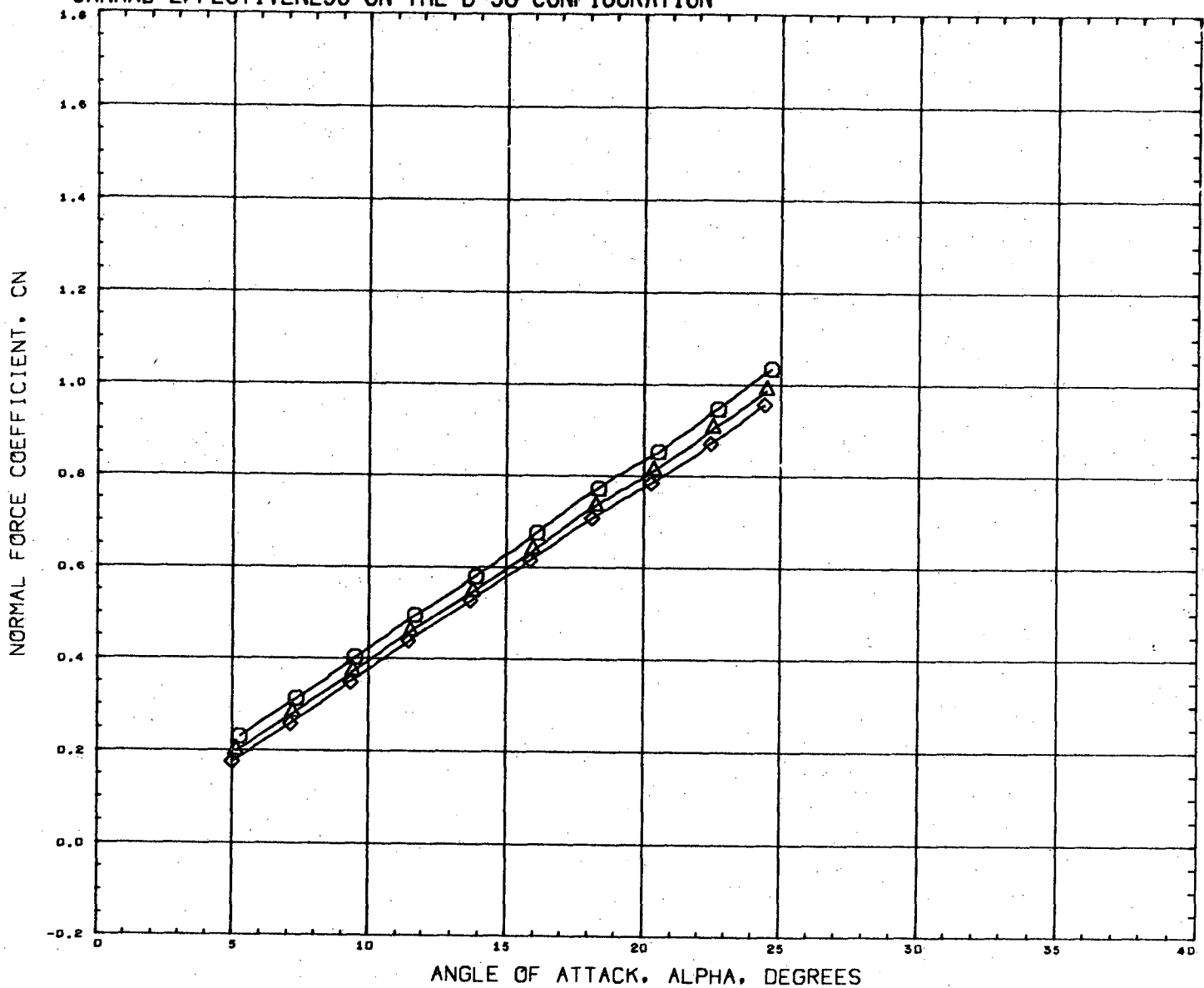
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.194

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

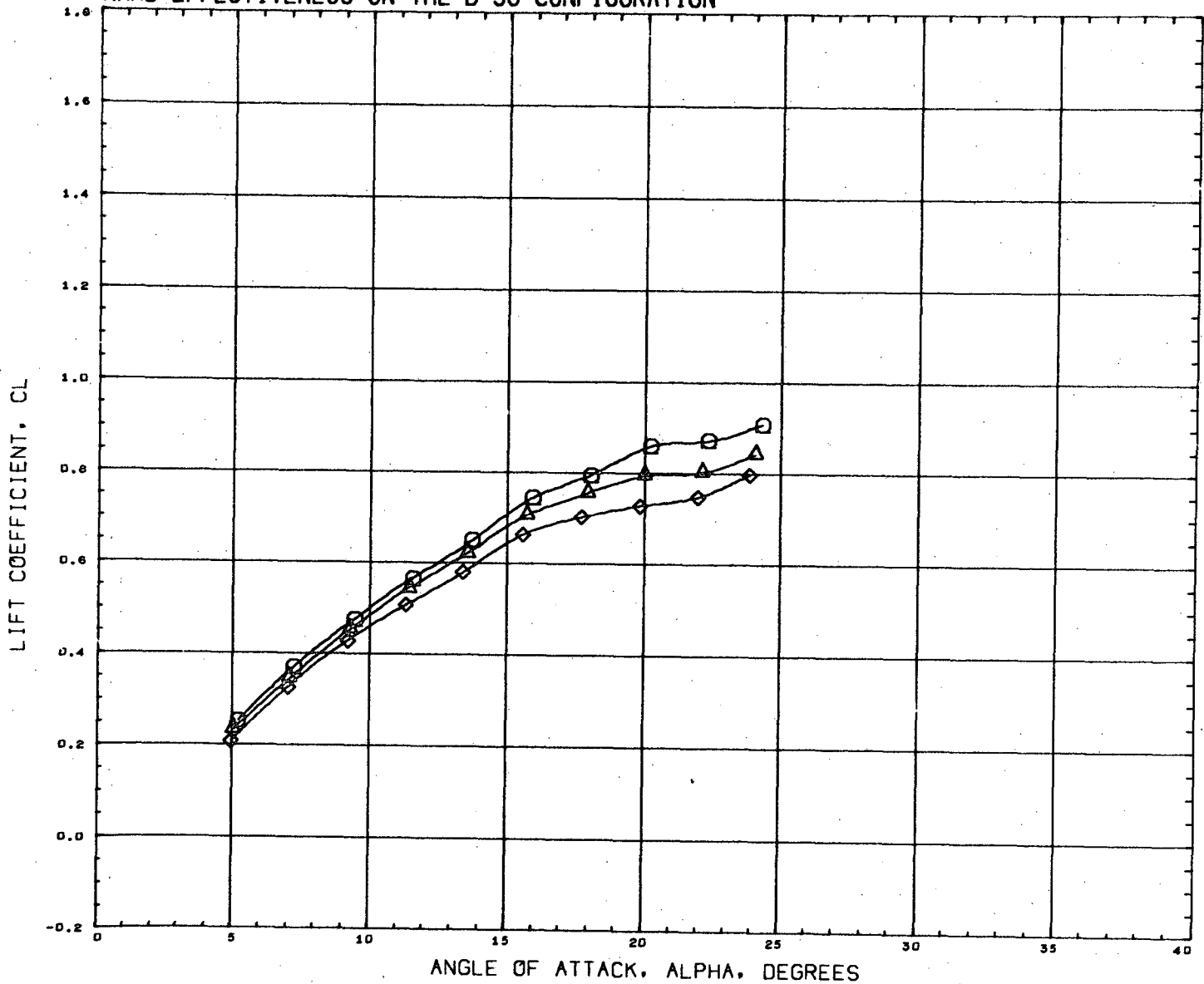


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.953

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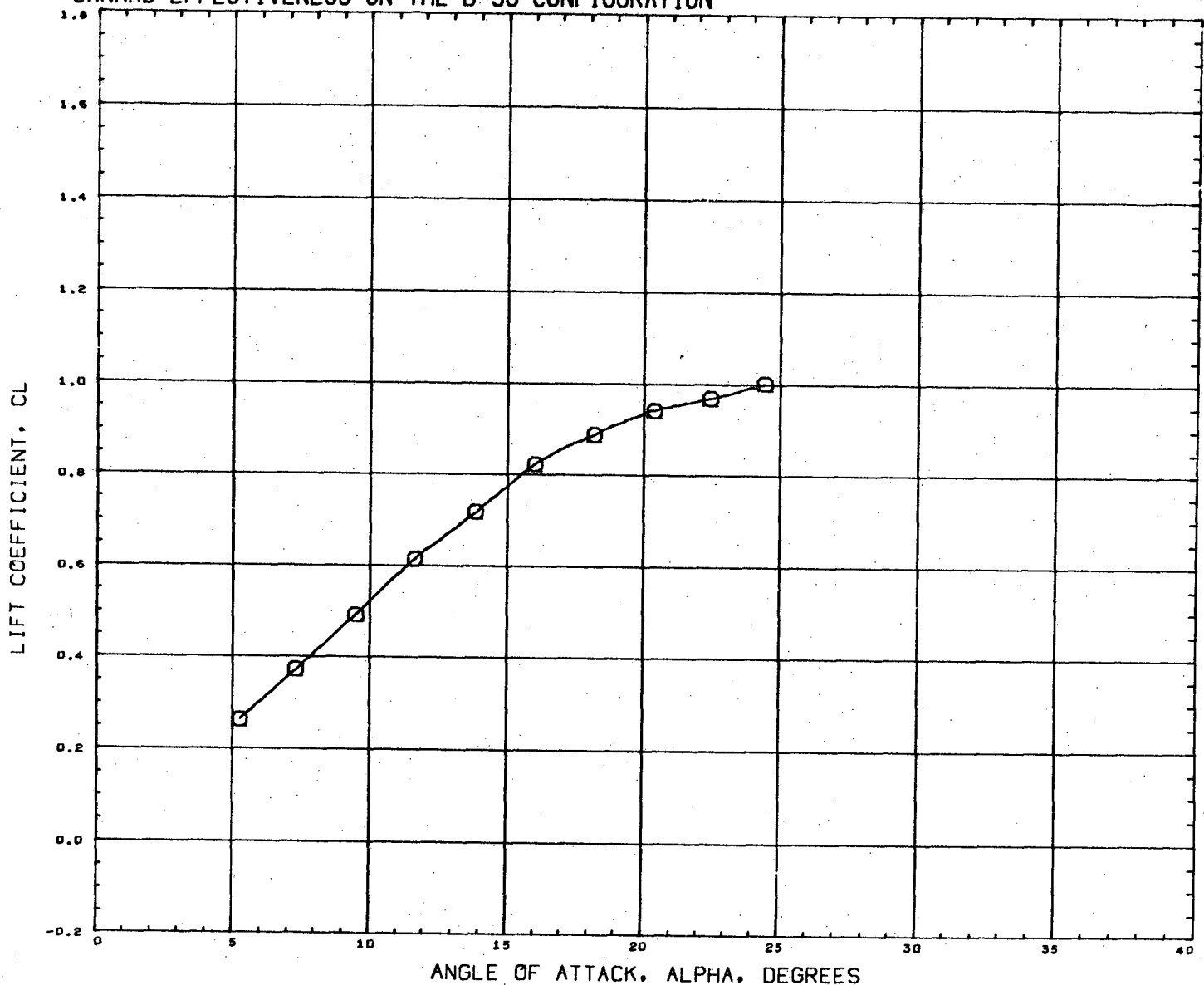
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 0.899

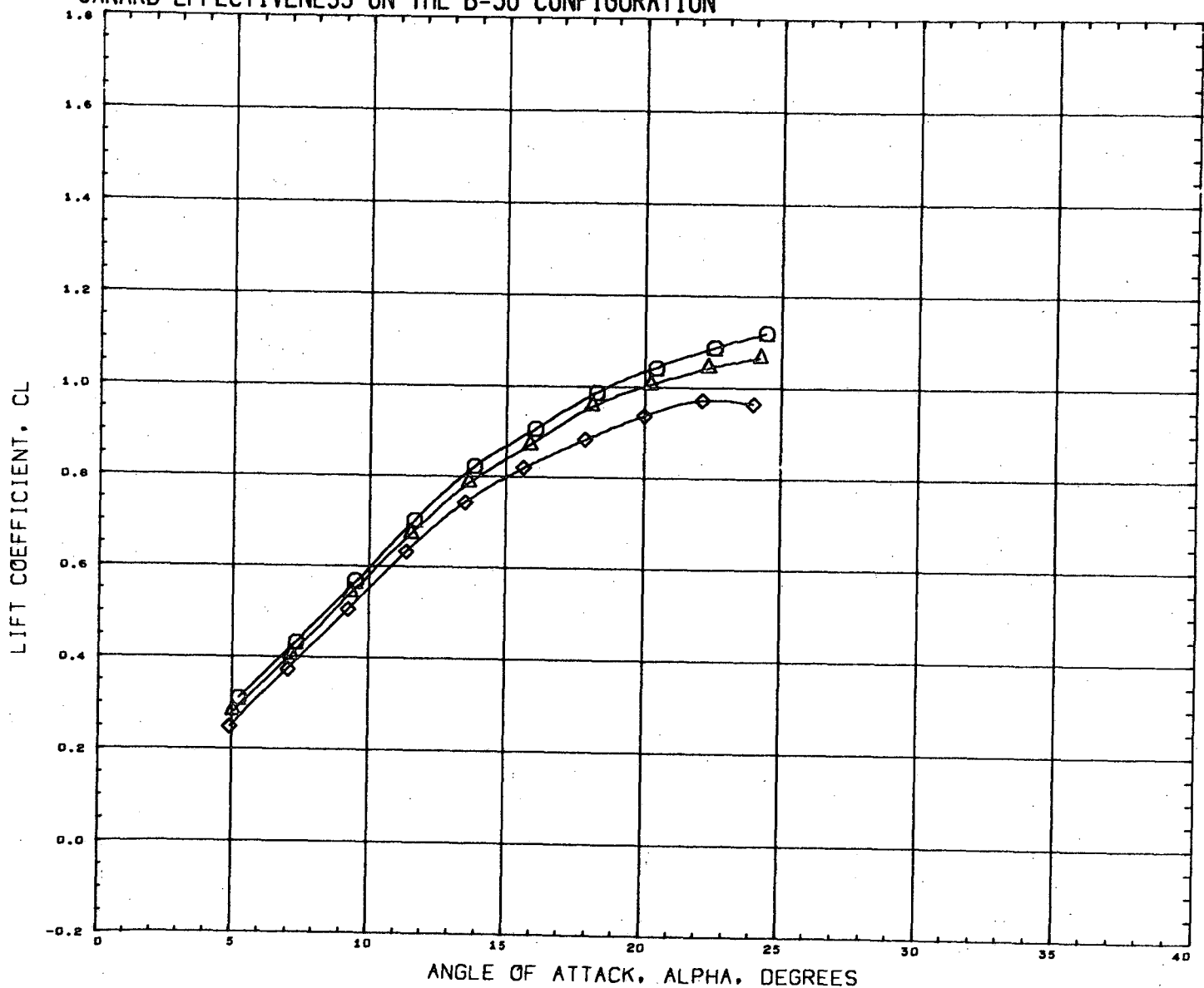
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(D35CAA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	-15.000	0.000	LREF	3.0120 IN.
(E35CAB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	-30.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 0.961

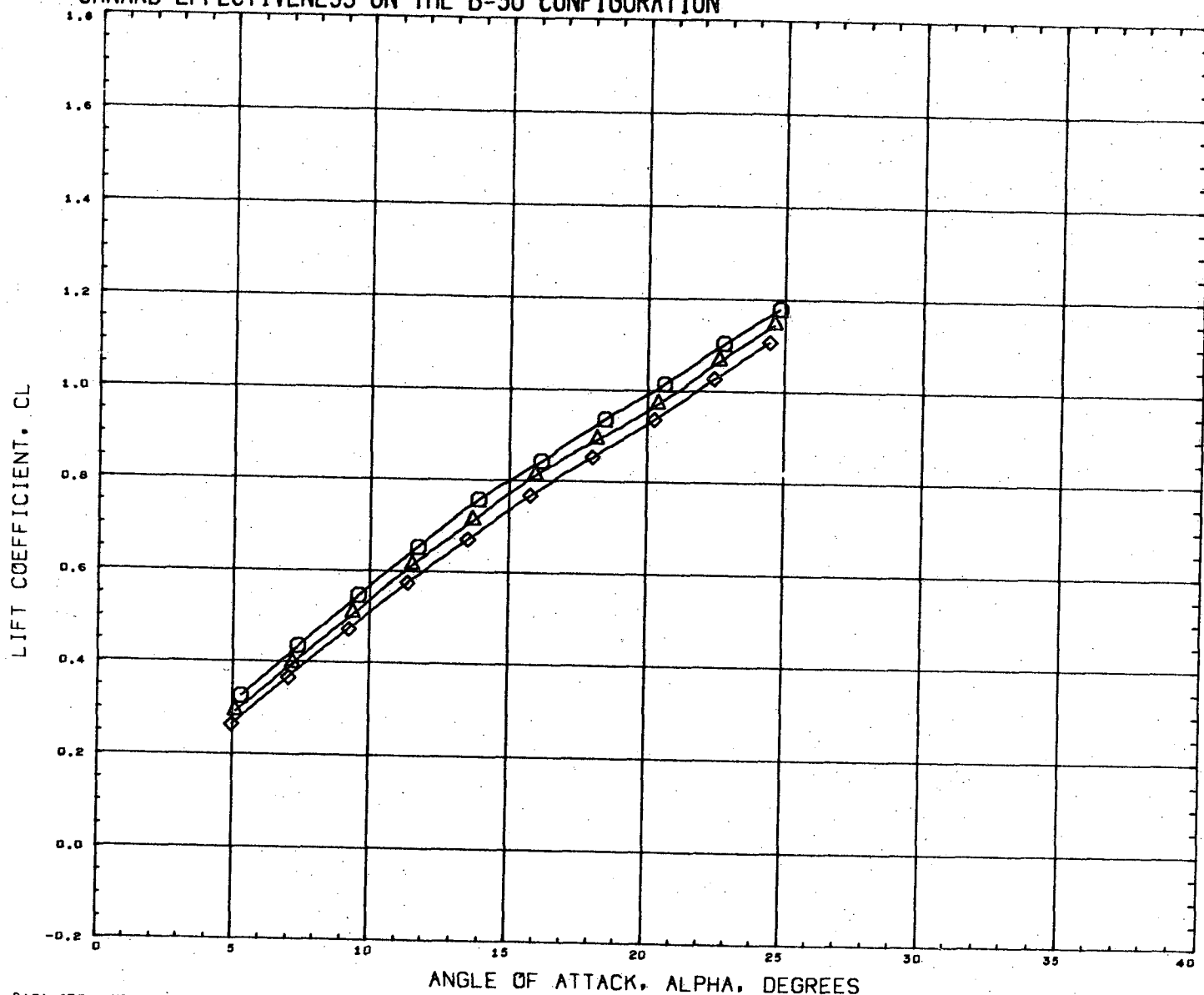
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.002

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

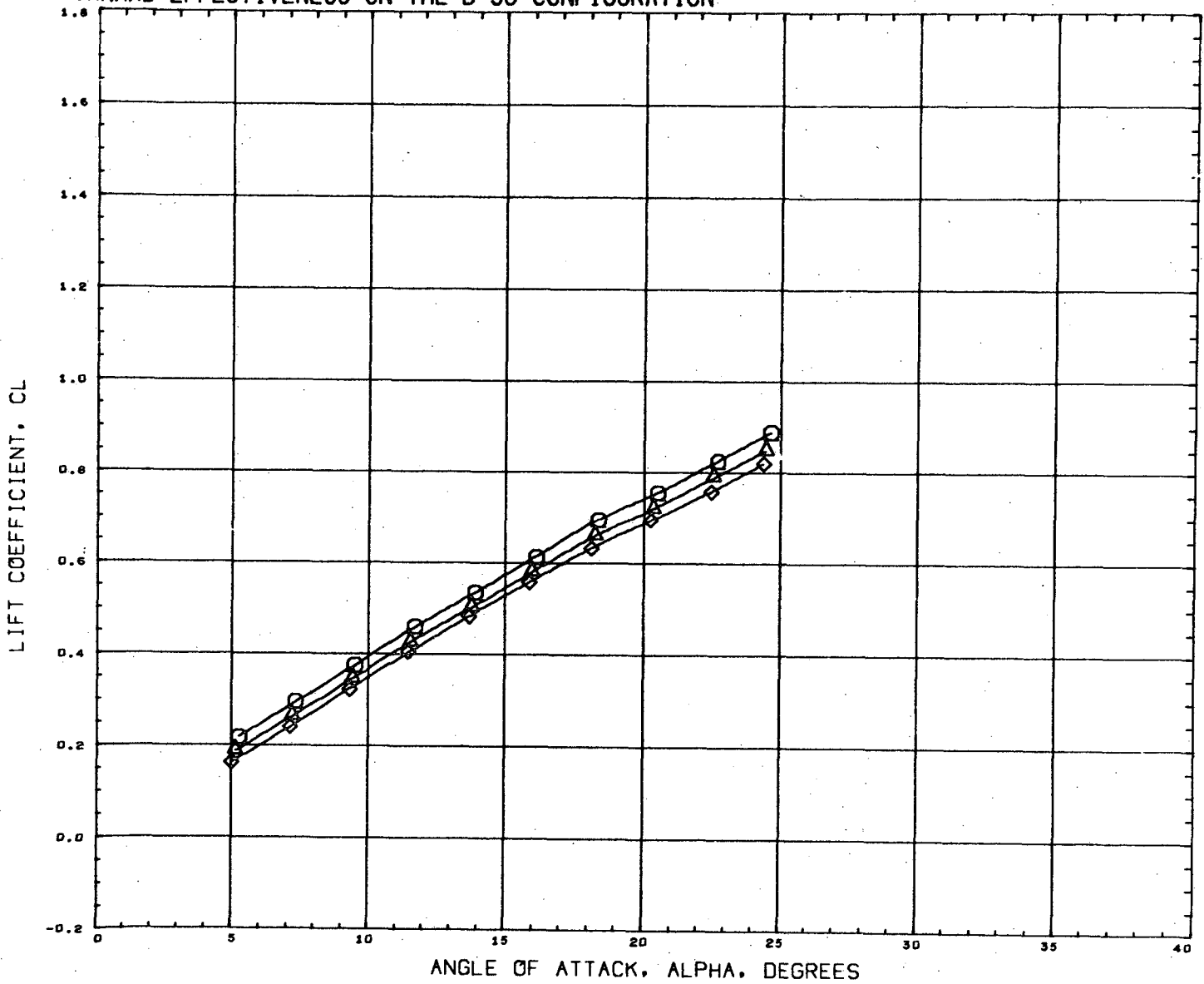


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ.IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.194

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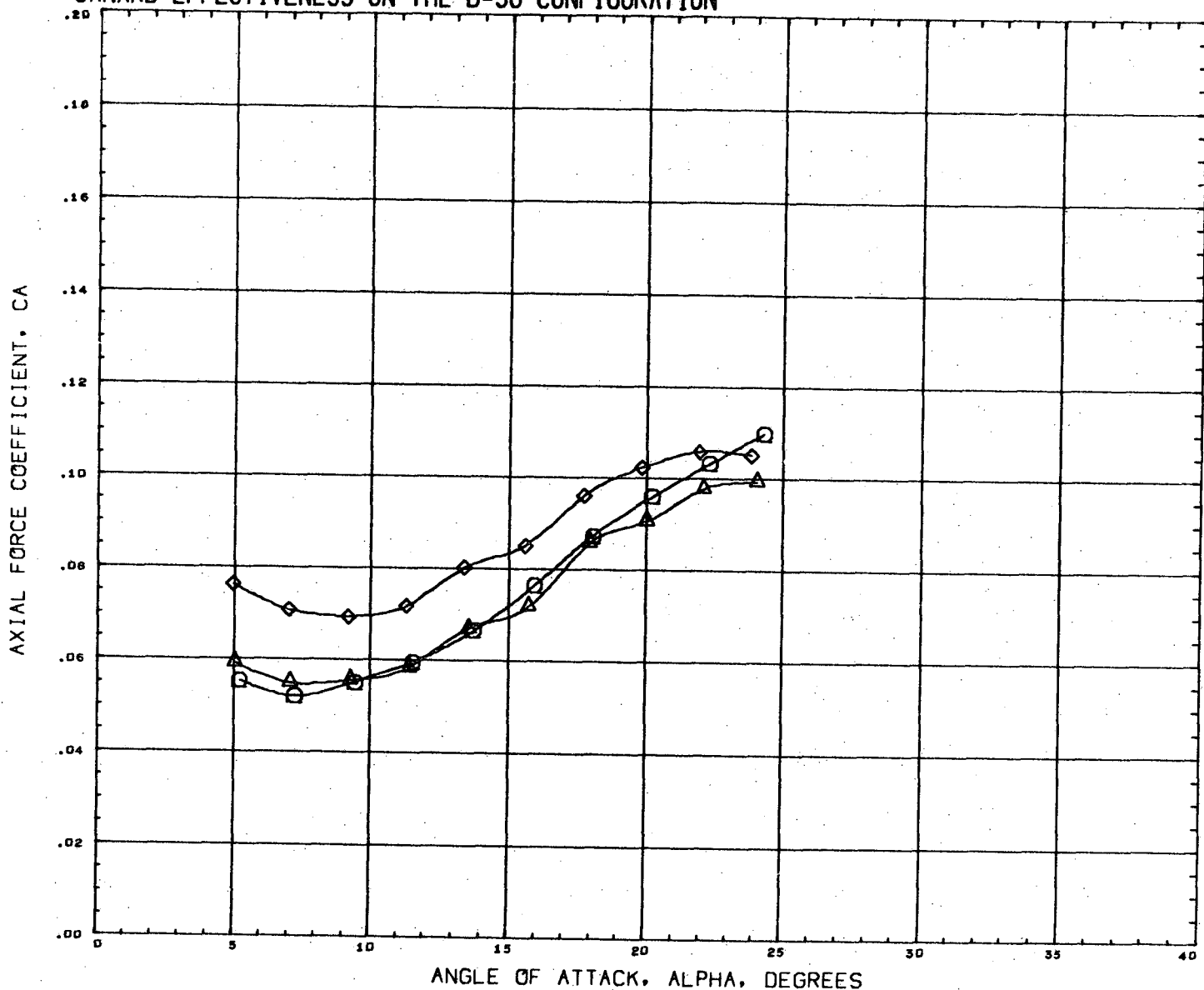
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0160 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.953

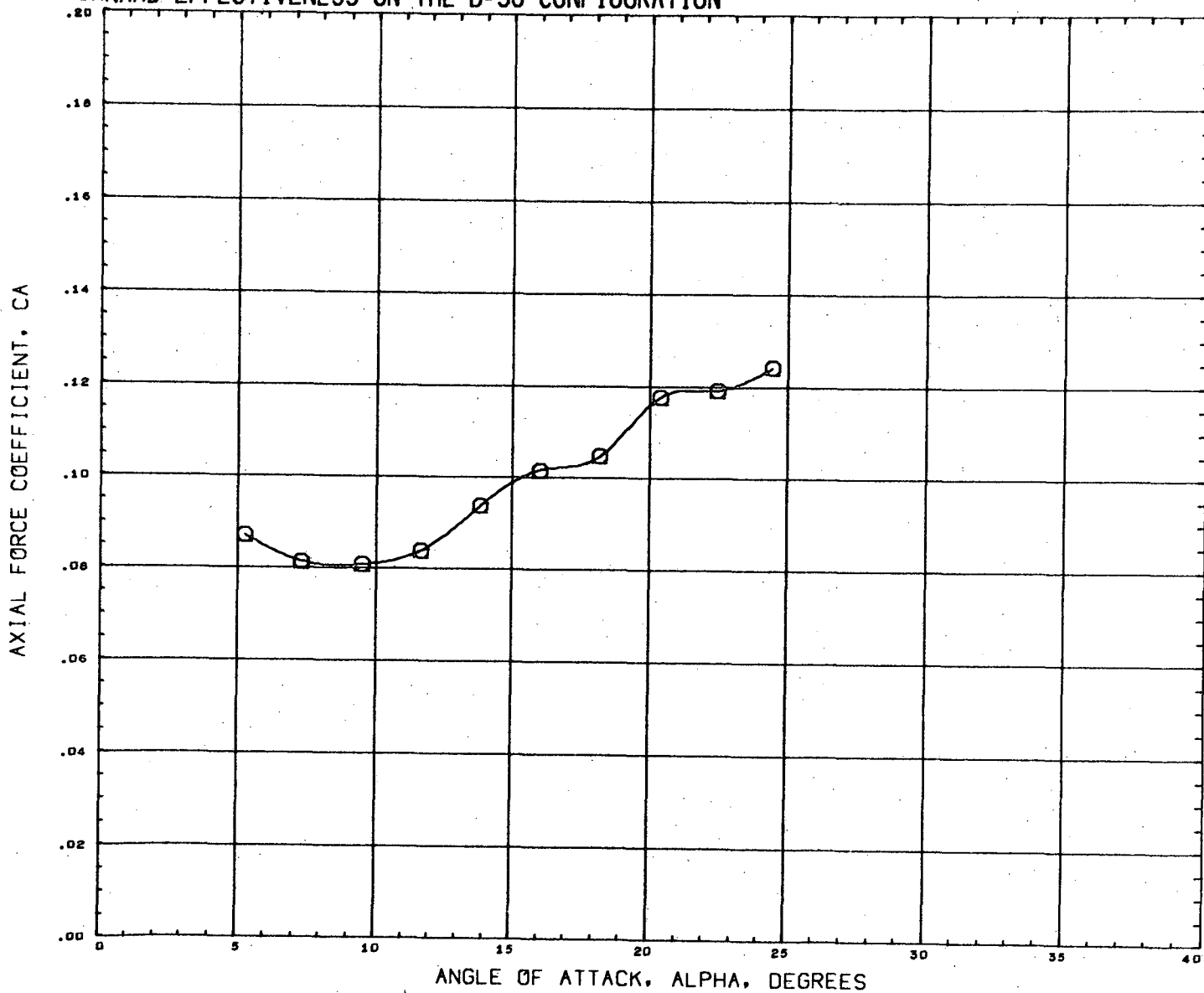
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(J35EAO)	○	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(D35CAA)	△	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(E35CAB)	◇	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
							XMRP 7.2990 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0035

MACH 0.899

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(J35EAO) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0
 (D35CAA) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35CAB) DATA NOT AVAILABLE FOR ALL CONDITIONS

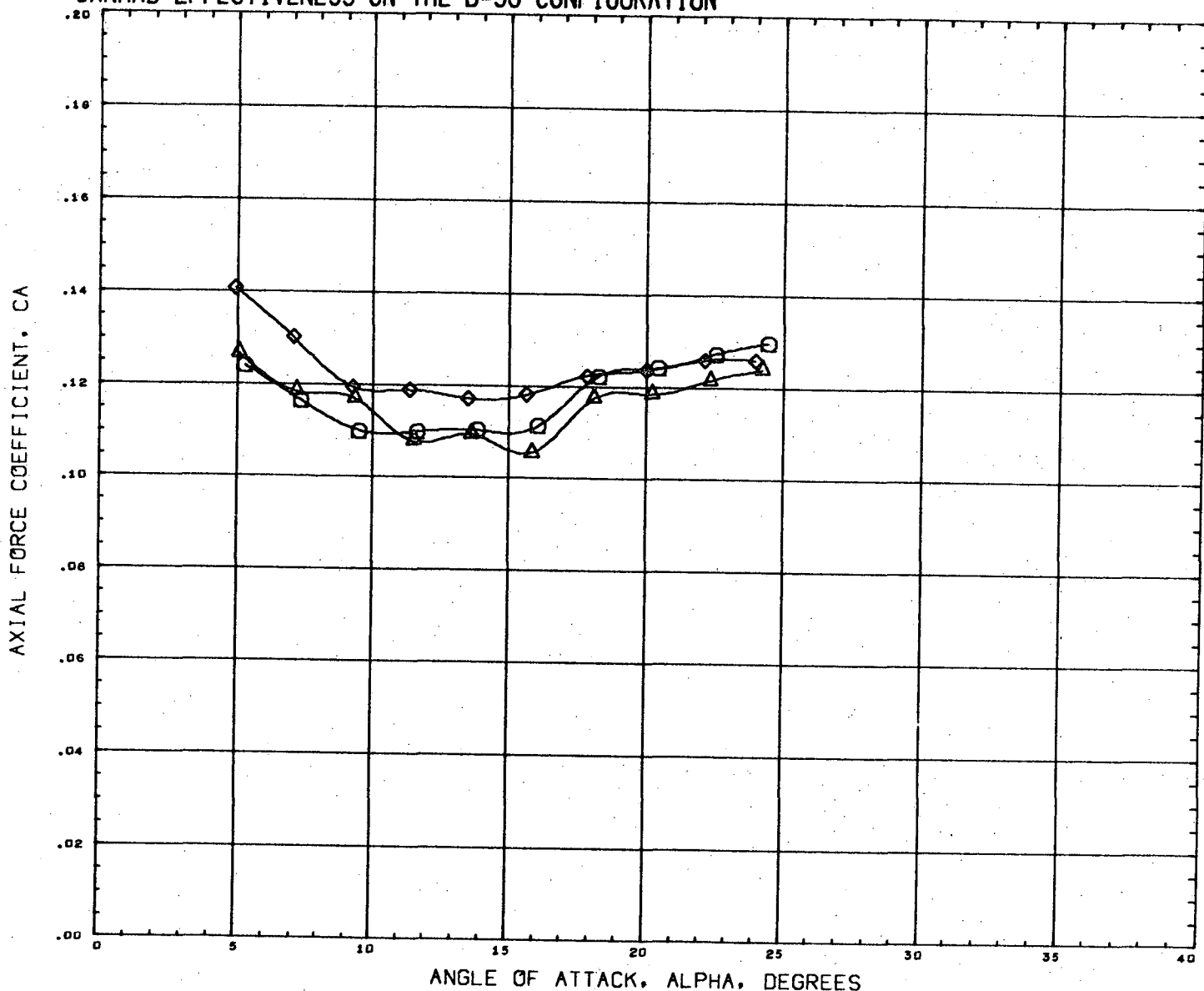
BETA	ELEVON	CANARD	RUDDER
0.000	0.000	0.000	0.000
0.000	0.000	-15.000	0.000
0.000	0.000	-30.000	0.000

REFERENCE INFORMATION

SREF	14.9040	Sq. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

MACH 0.961

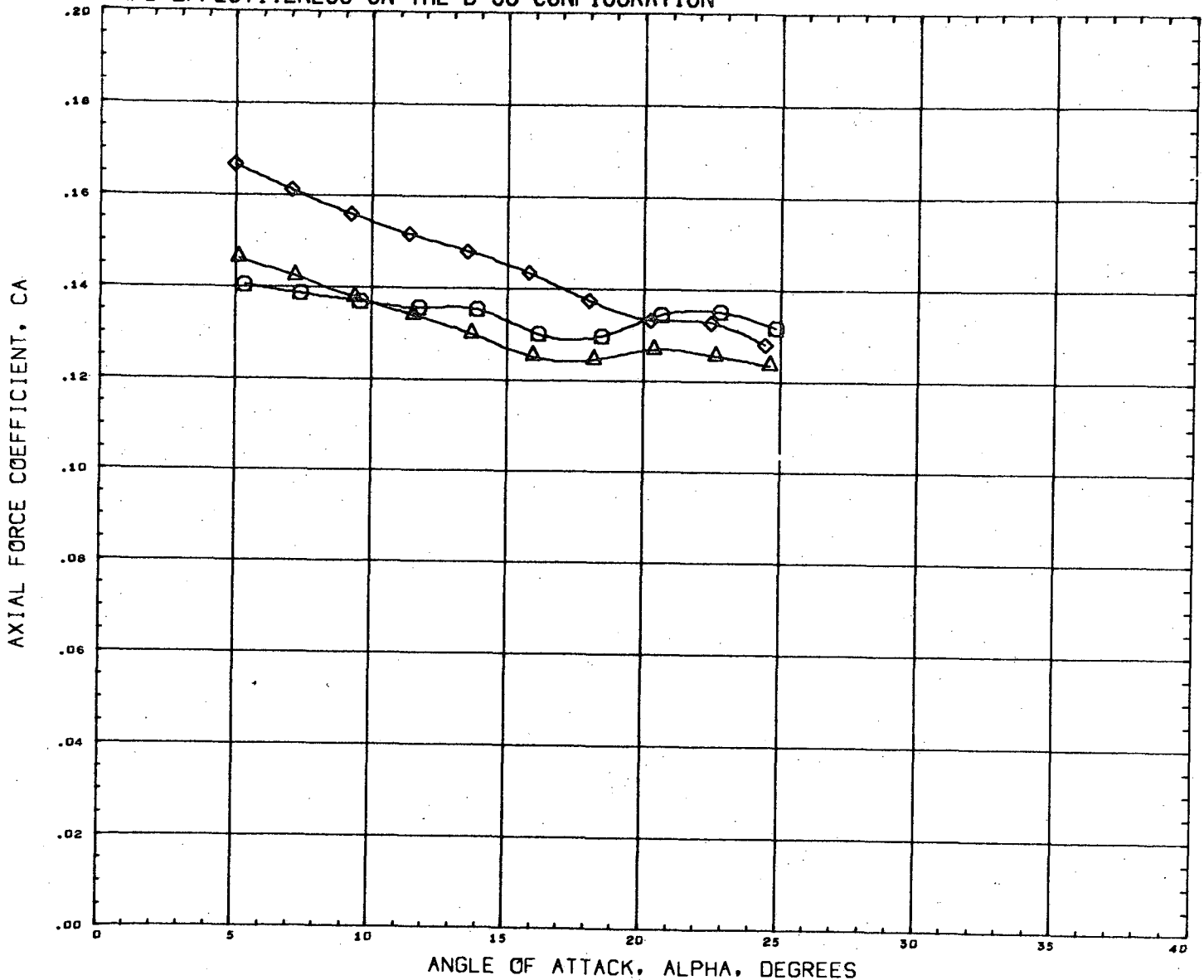
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ.IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.002

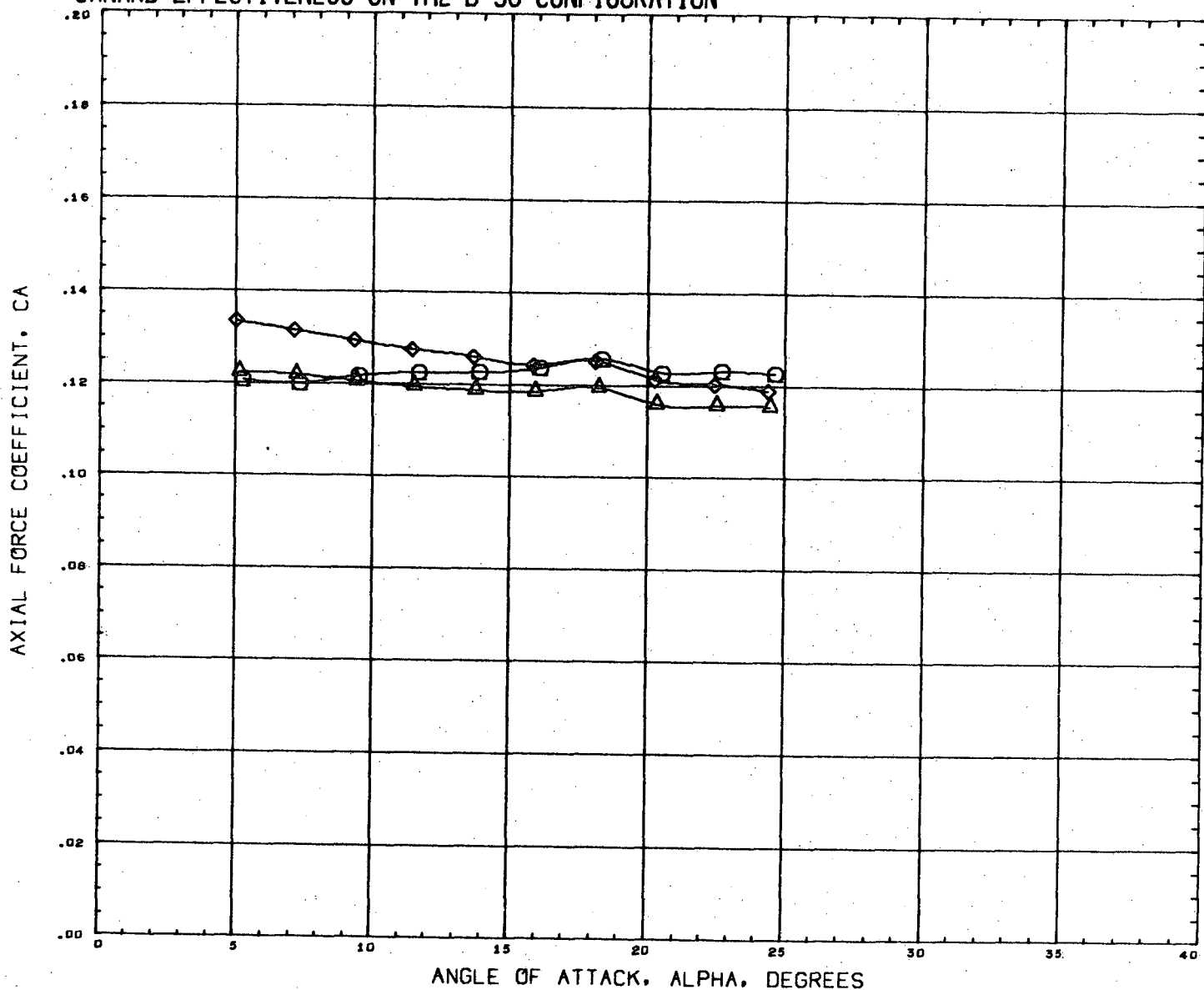
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XRFP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.194

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=D R=D	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0180 IN.
						XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

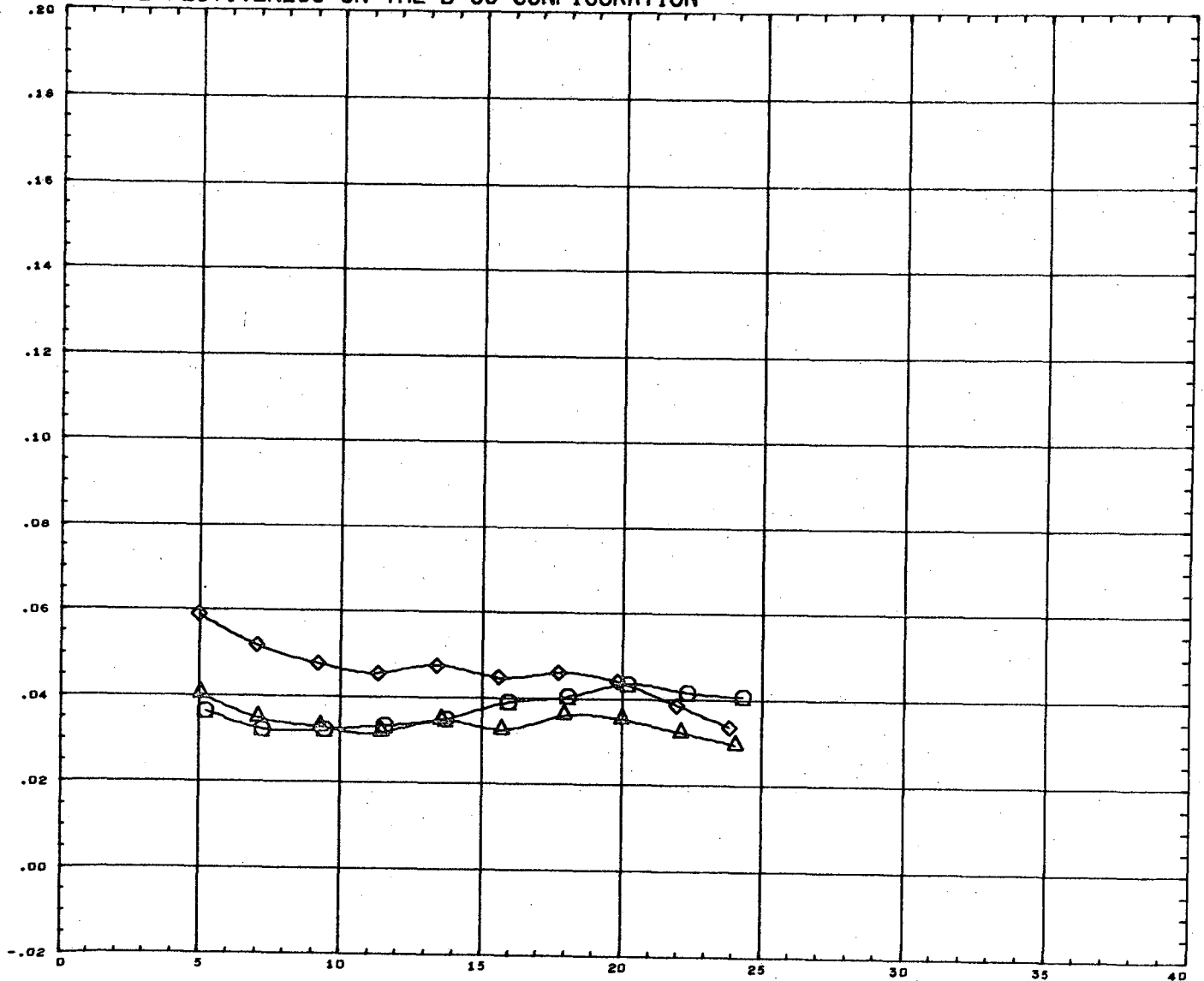
MACH 1.953

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CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

FOREBODY AXIAL FORCE COEFFICIENT, CAF



DATA SET SYMBOL CONFIGURATION DESCRIPTION

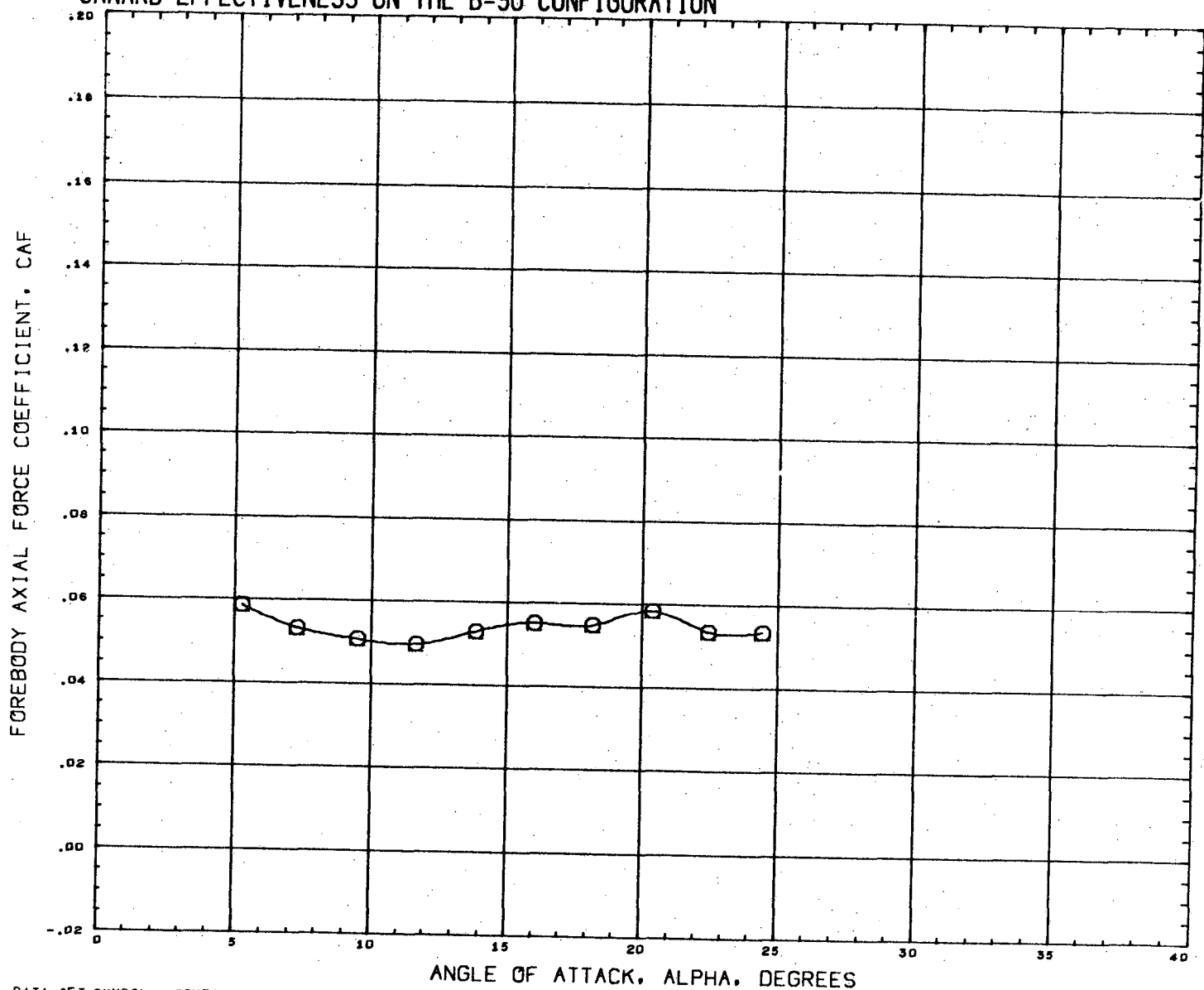
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 (D35CAA) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0
 (E35CAB) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0

BETA ELEVON CANARD RUDDER
 0.000 0.000 0.000 0.000
 0.000 0.000 -15.000 0.000
 0.000 0.000 -30.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 0.899

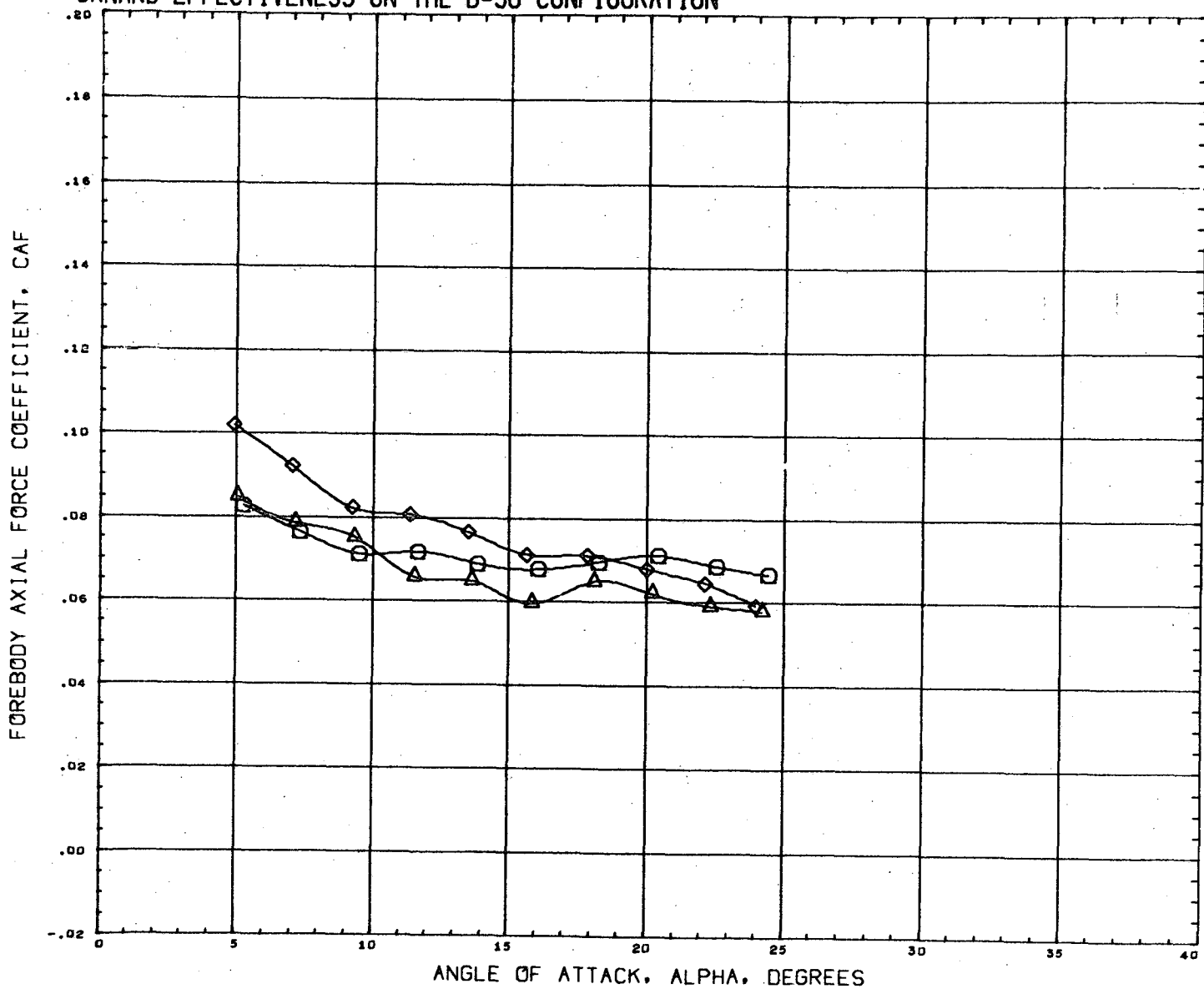
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(D35CAA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	-15.000	0.000	LREF	3.0120 IN.
(E35CAB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	-30.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 0.961

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(J35EAO)	MSFC TWT-493 GD/C	B25W19C8V10	E=0	C=0	R=0
(D35CAA)	MSFC TWT-493 GD/C	B25W19C8V10	E=0	C=-15	R=0
(E35CAB)	MSFC TWT-493 GD/C	B25W19C8V10	E=0	C=-30	R=0

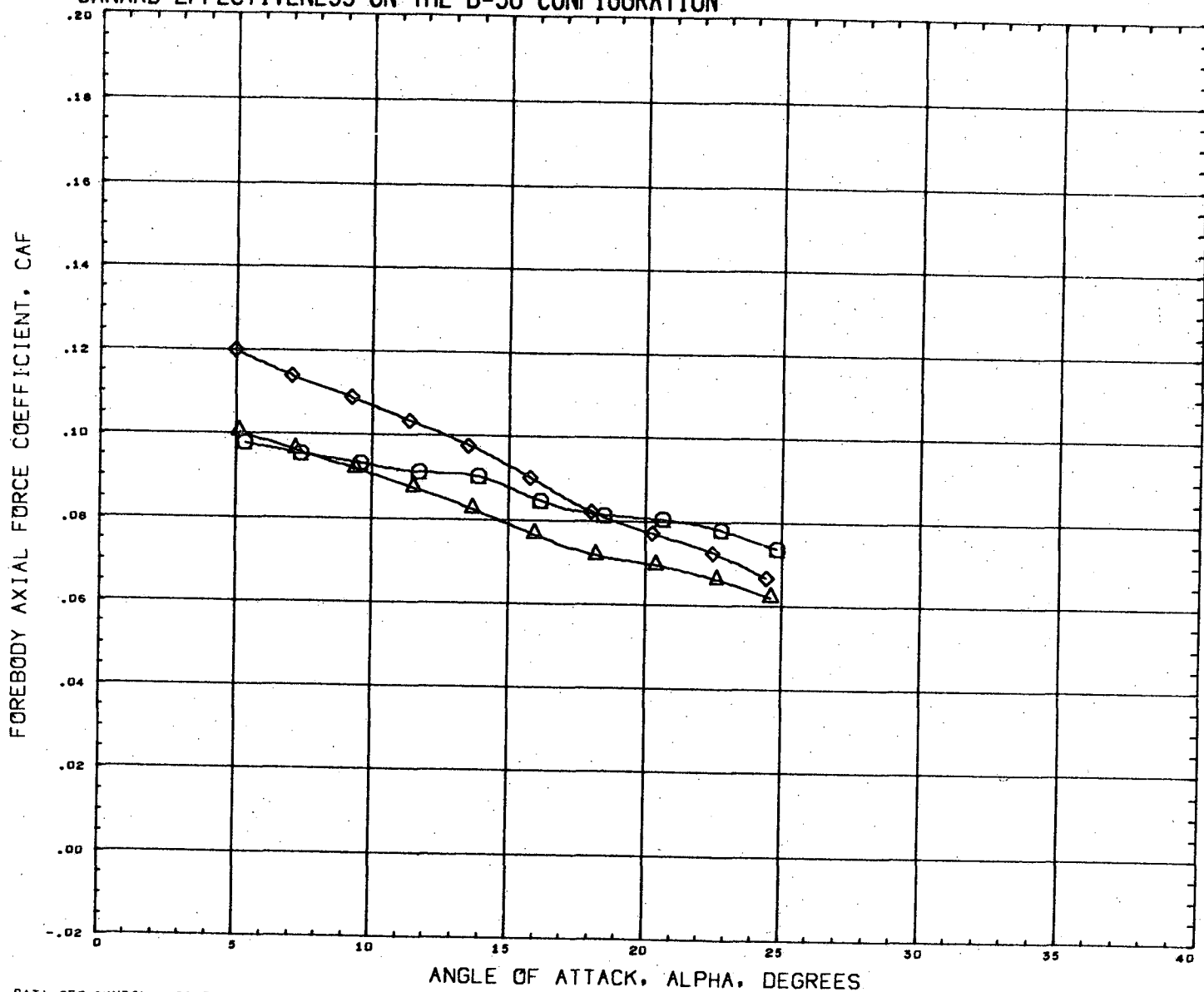
BETA	ELEVON	CANARD	RUDDER
0.000	0.000	0.000	0.000
0.000	0.000	-15.000	0.000
0.000	0.000	-30.000	0.000

REFERENCE INFORMATION

SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

MACH 1.002

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



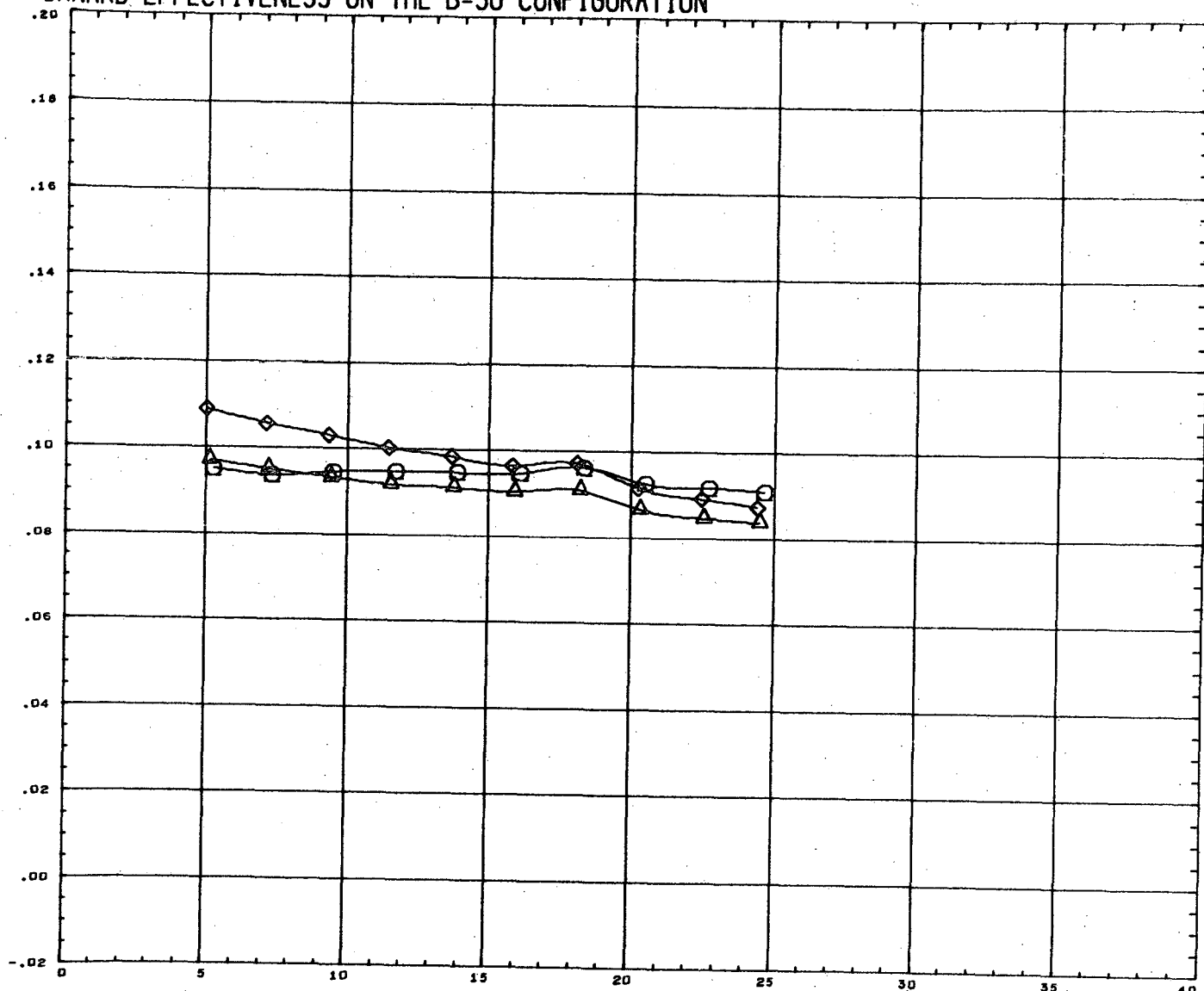
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 59. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.194

ORIGINAL PAGE IS
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CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

FOREBODY AXIAL FORCE COEFFICIENT, CAF

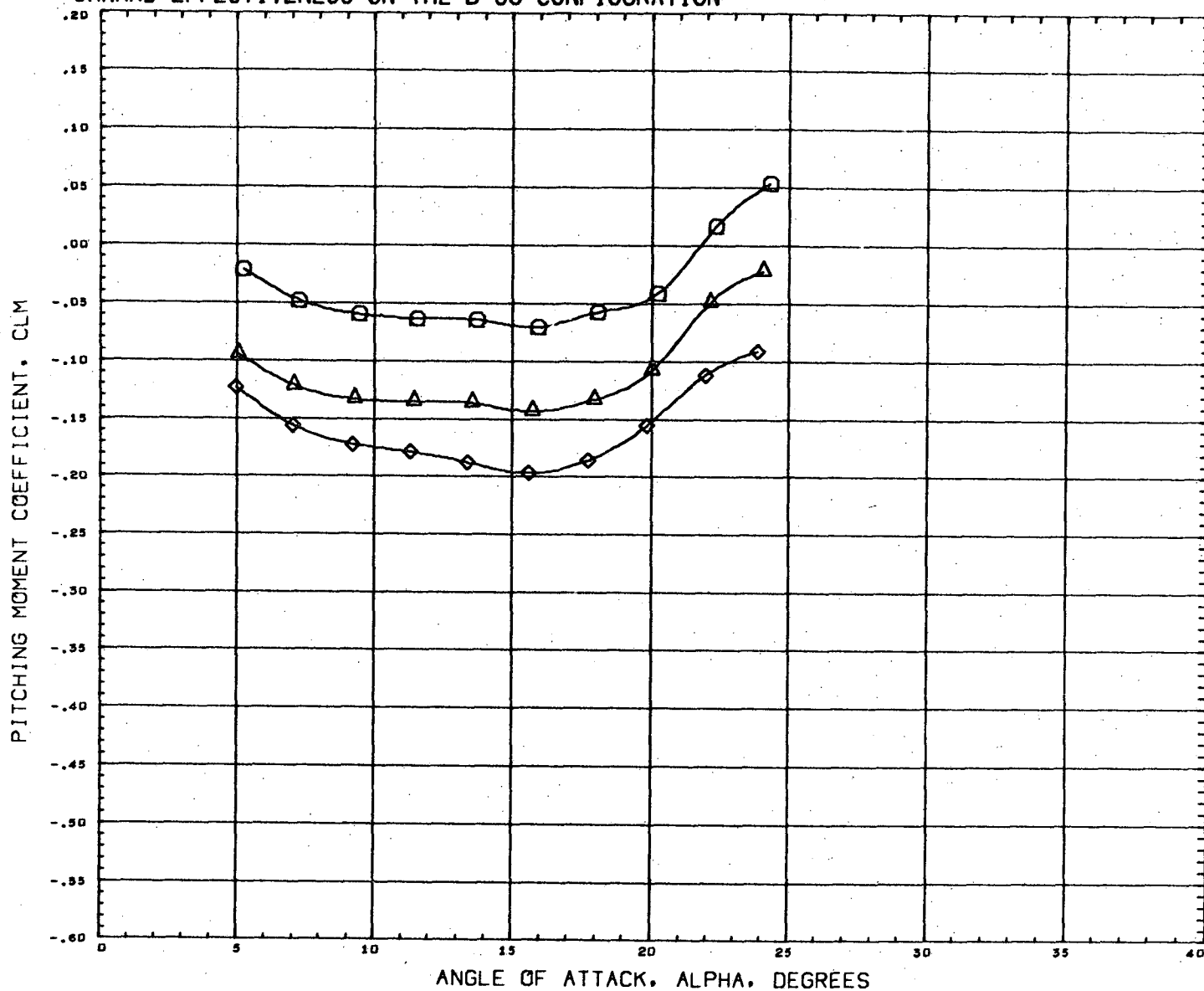


ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 1.953

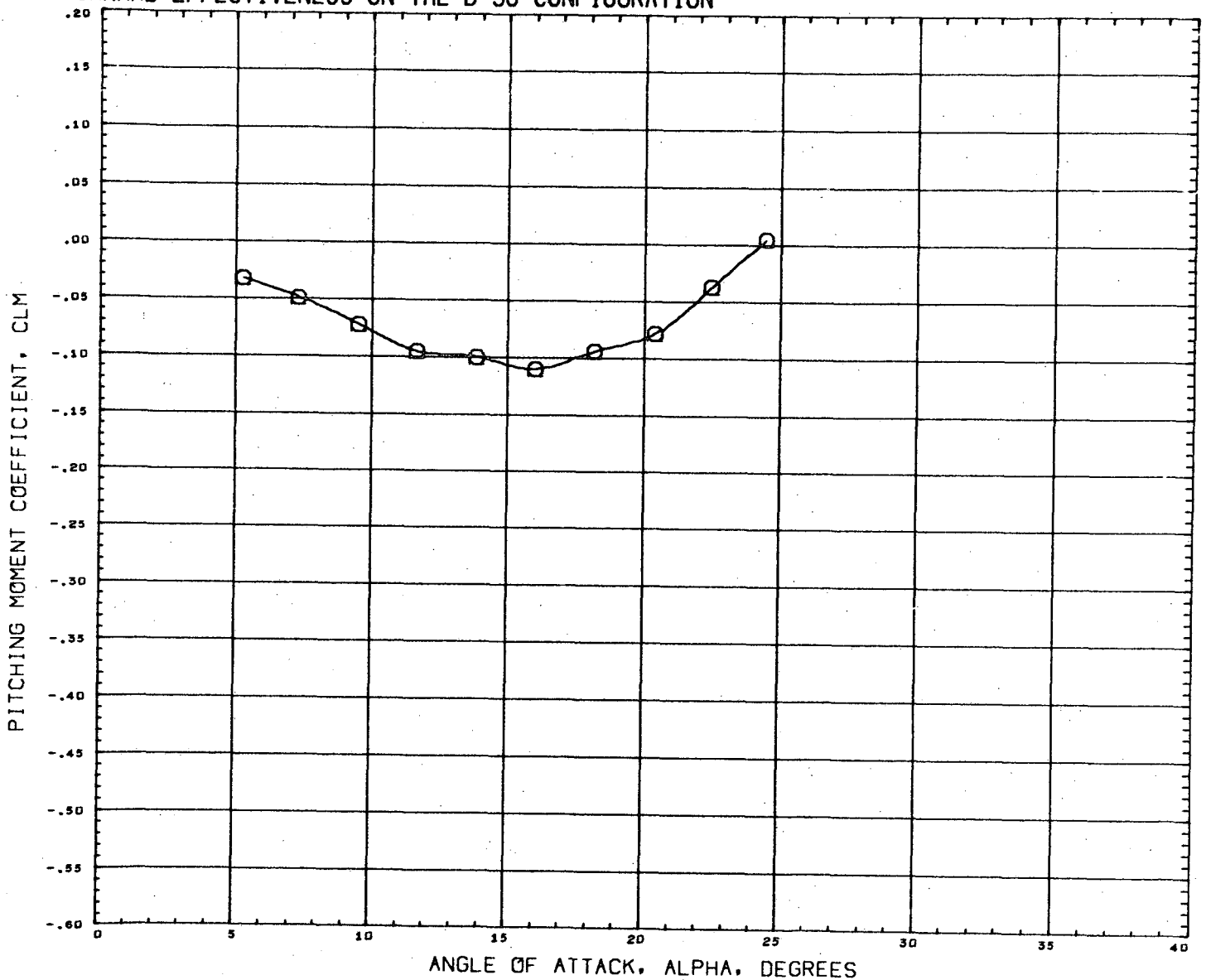
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 sq. in.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120 in.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0180 in.
						XMRP	7.2990 in.
						YMRP	0.0000 in.
						ZMRP	0.0000 in.
						SCALE	0.0035

MACH 0.899

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL CONFIGURATION DESCRIPTION

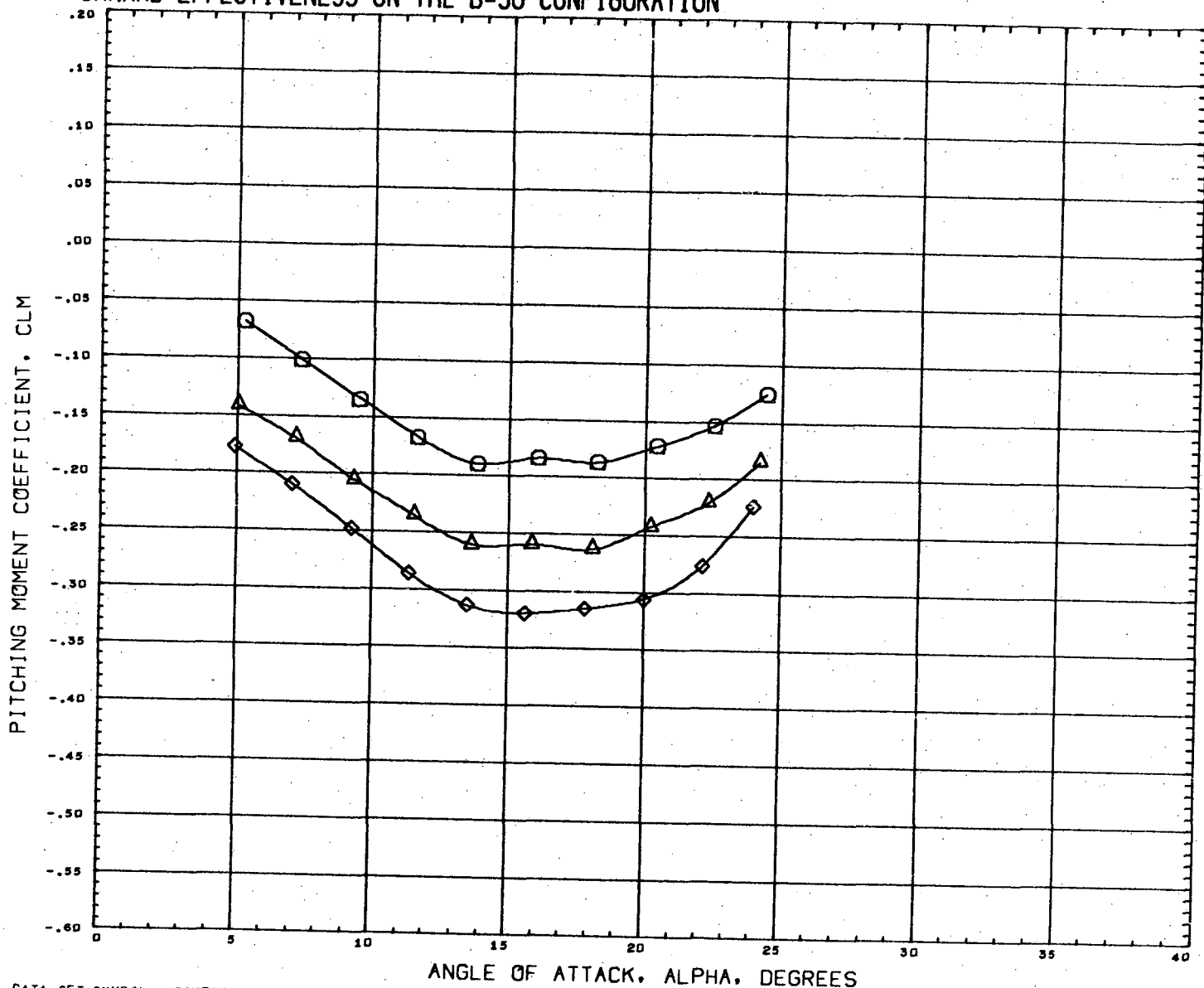
(J35EAO) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0
 (D35CAA) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35CAB) DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA ELEVON CANARD RUDDER
 0.000 0.000 0.000 0.000
 0.000 0.000 -15.000 0.000
 0.000 0.000 -30.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 0.961

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

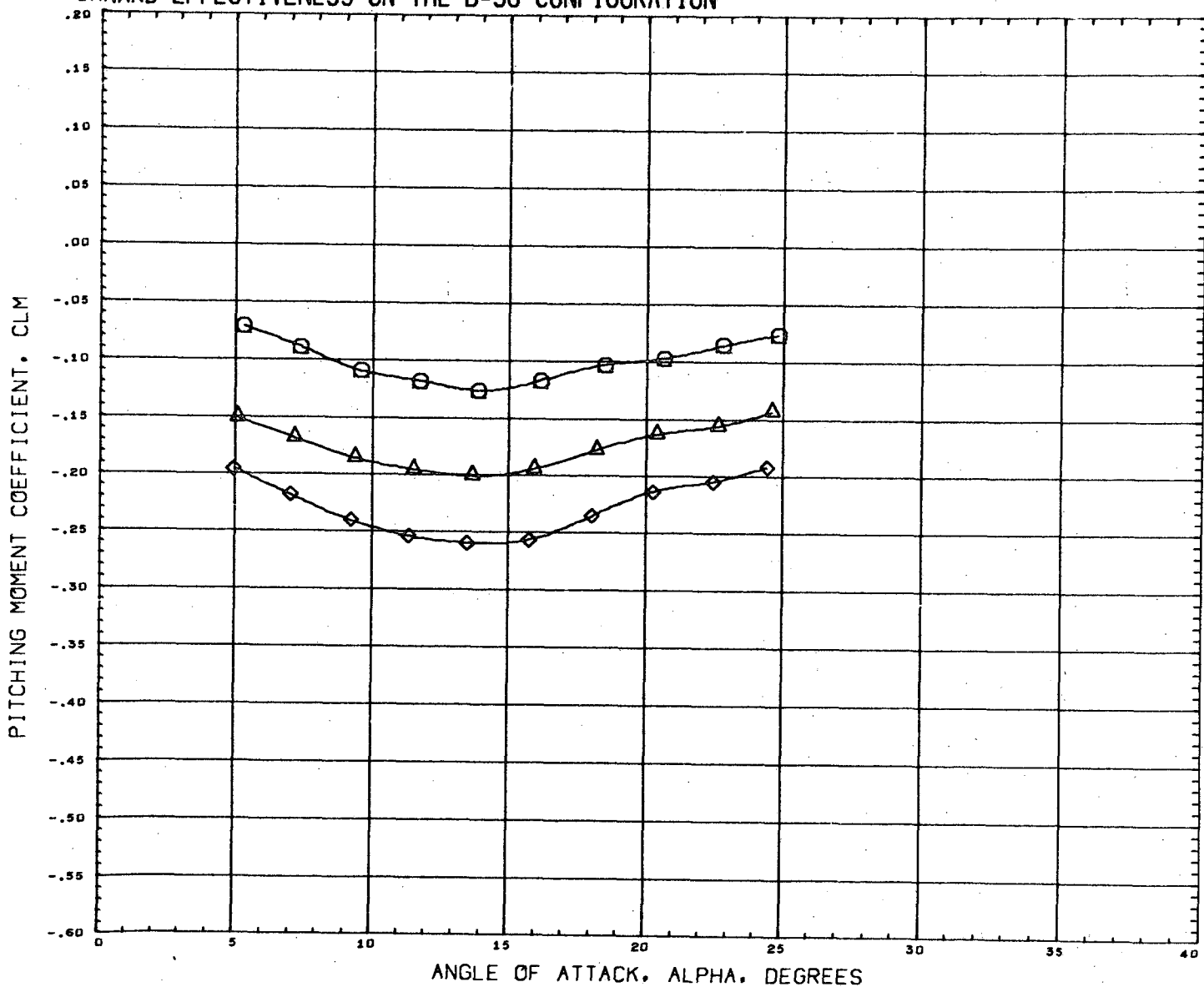


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.002

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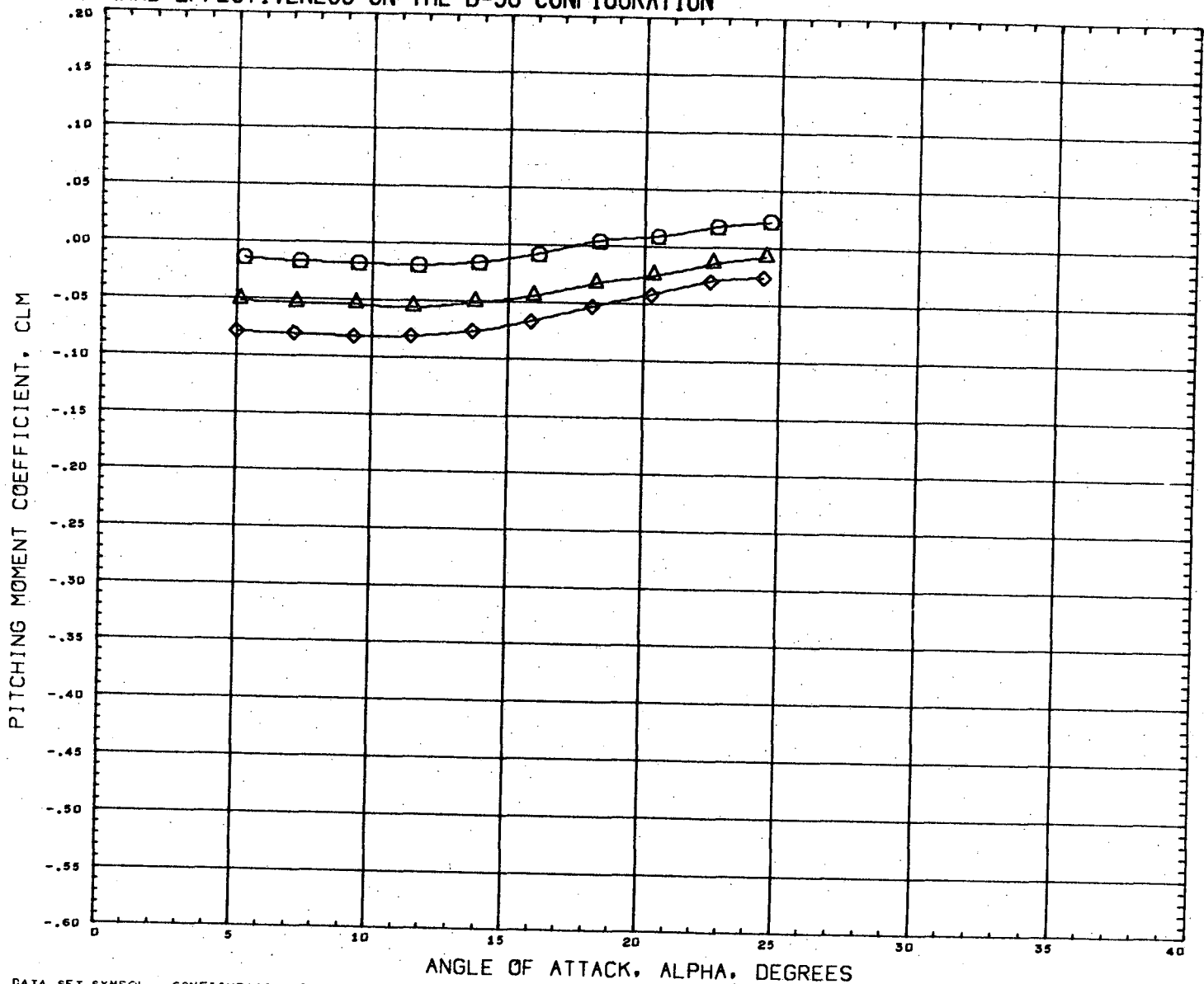
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.194

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(J35EAO)	MSFC TWT-493 GD/C	B25W19C8V10	E=0	C=0	R=0
(D35CAA)	MSFC TWT-493 GD/C	B25W19C8V10	E=0	C=-15	R=0
(E35CAB)	MSFC TWT-493 GD/C	B25W19C8V10	E=0	C=-30	R=0

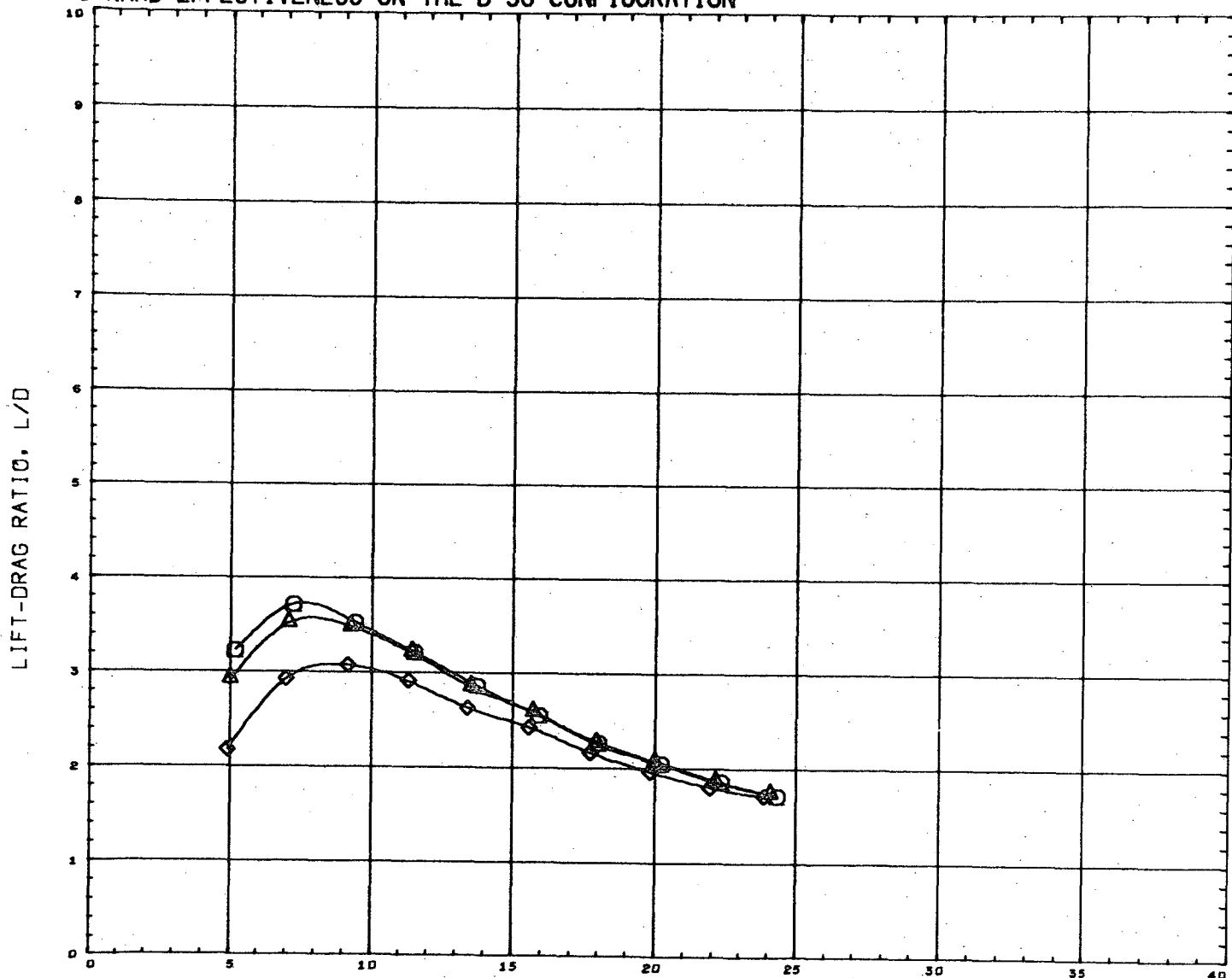
BETA	ELEVON	CANARD	RUDDER
0.000	0.000	0.000	0.000
0.000	0.000	-15.000	0.000
0.000	0.000	-30.000	0.000

REFERENCE INFORMATION

SREF	14.9040	sq.in.
LREF	3.0120	in.
BREF	6.0180	in.
XMRP	7.2990	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0035	

MACH 1.953

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL CONFIGURATION DESCRIPTION

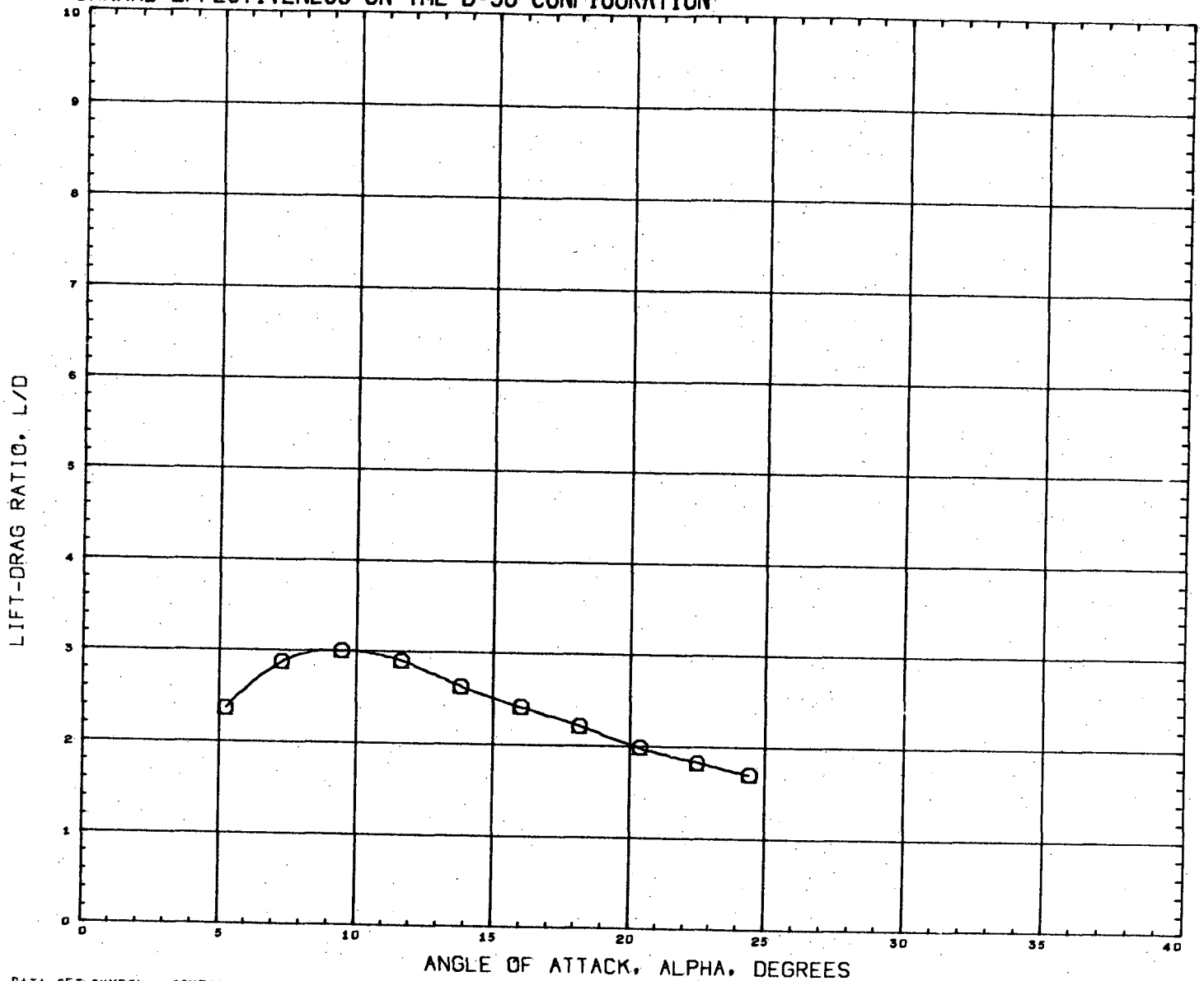
(J35EAO) MSFC TWT-493 GD/C B25W19C8V1D E=0 C=0 R=0
 (D35CAA) MSFC TWT-493 GD/C B25W19C8V1D E=0 C=-15 R=0
 (E35CAB) MSFC TWT-493 GD/C B25W19C8V1D E=0 C=-30 R=0

BETA ELEVON CANARD RUDDER
 0.000 0.000 0.000 0.000
 0.000 0.000 -15.000 0.000
 0.000 0.000 -30.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 0.899

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

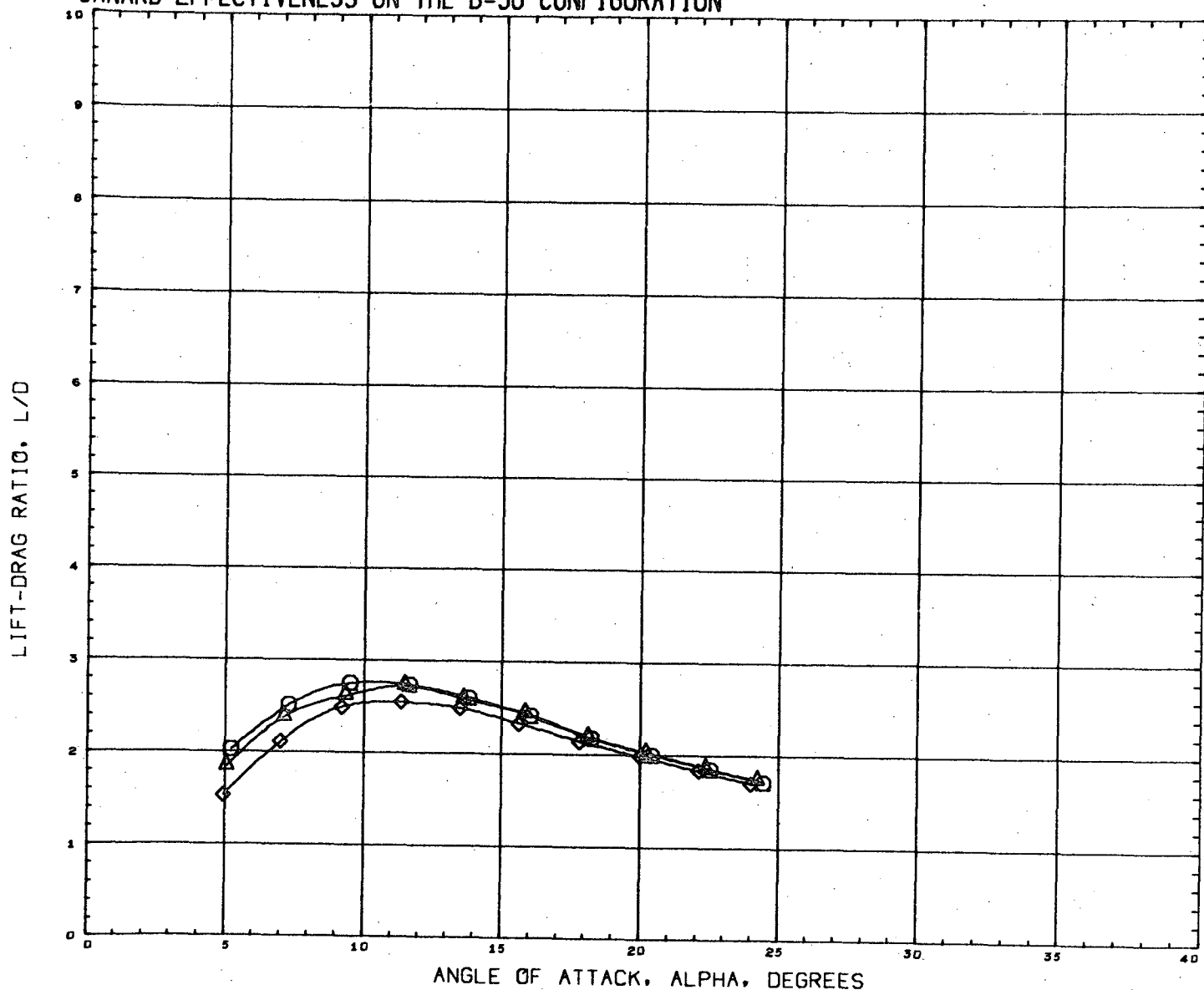


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(D35CAA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(E35CAB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 0.961

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CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL CONFIGURATION DESCRIPTION

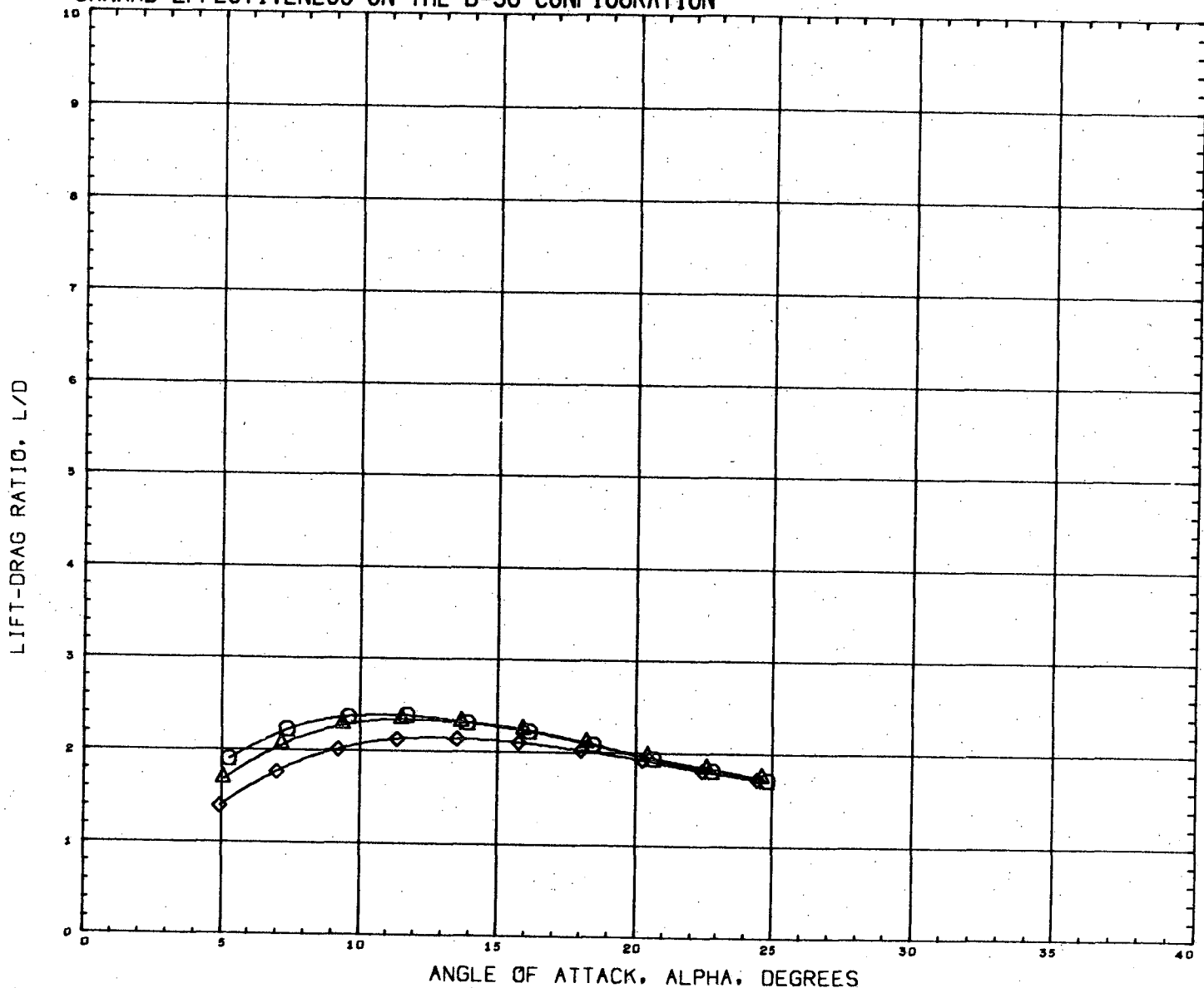
(J35EAO) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0
 (D35CAA) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0
 (E35CAB) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0

BETA ELEVON CANARD RUDDER
 0.000 0.000 0.000 0.000
 0.000 0.000 -15.000 0.000
 0.000 0.000 -30.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 1.002

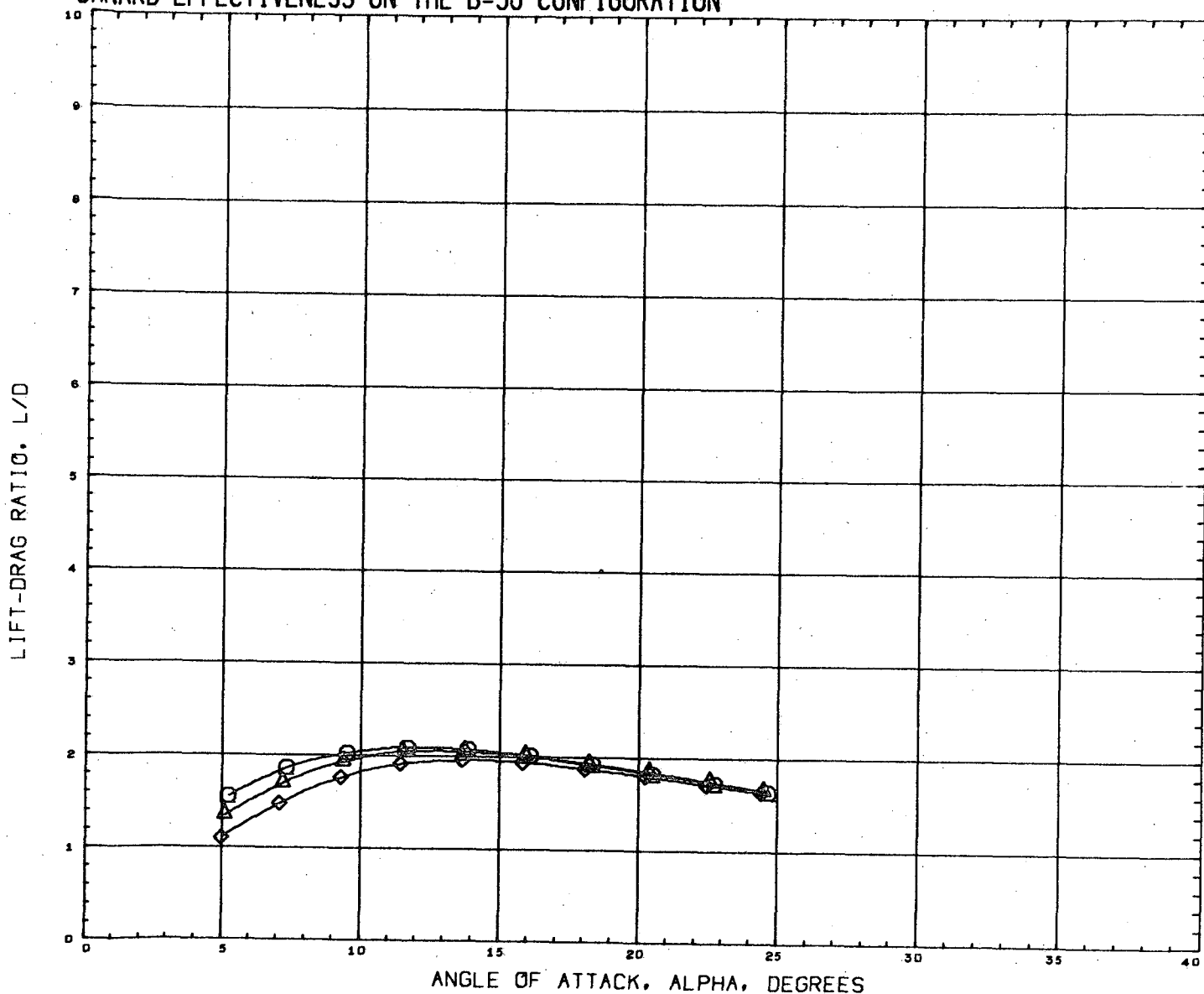
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(J35EAG)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.194

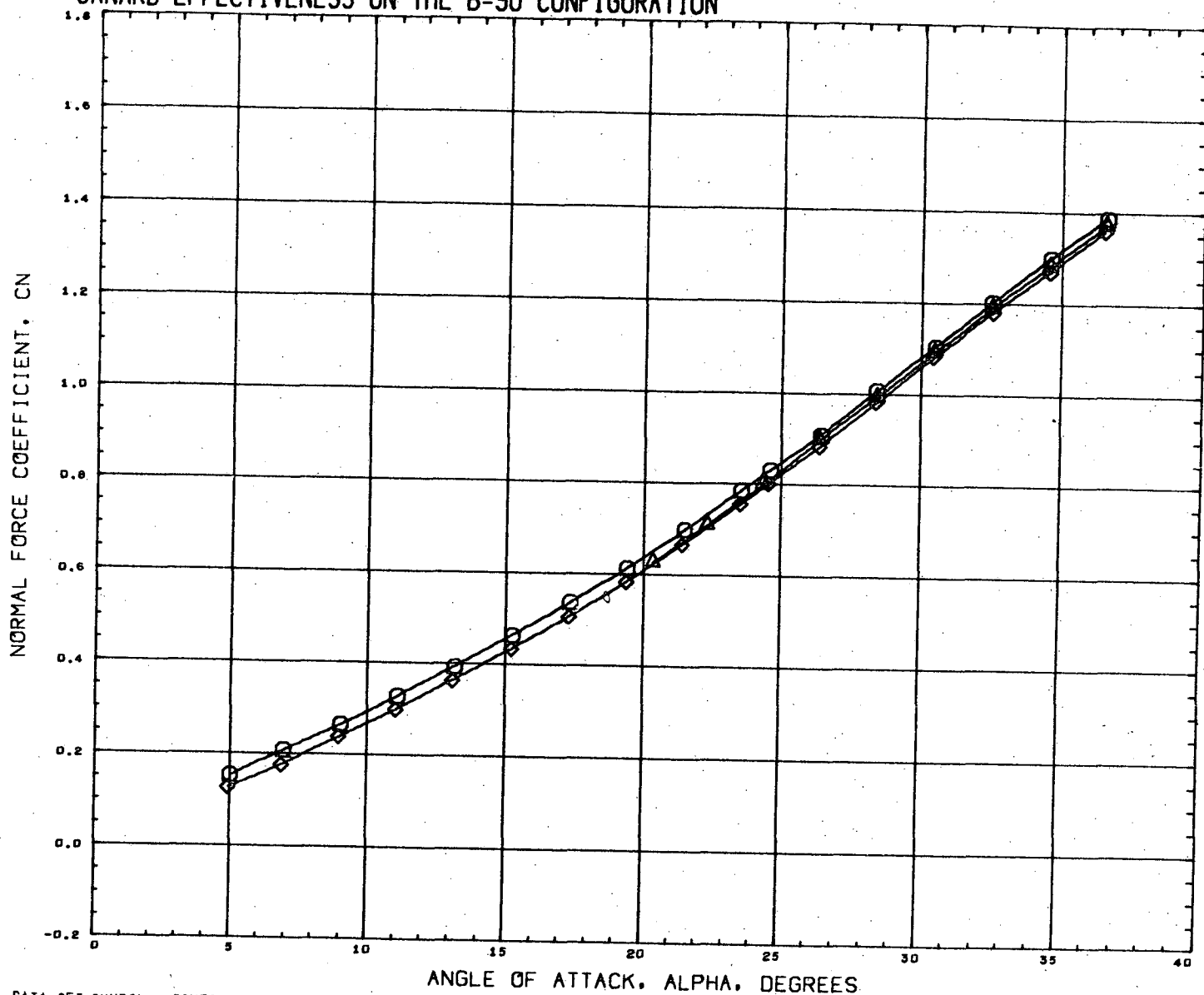
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION		
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040	SQ. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120	IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0180	IN.
						XMRF	7.2990	IN.
						YMRF	0.0000	IN.
						ZMRF	0.0000	IN.
						SCALE	0.0035	

MACH 1.953

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

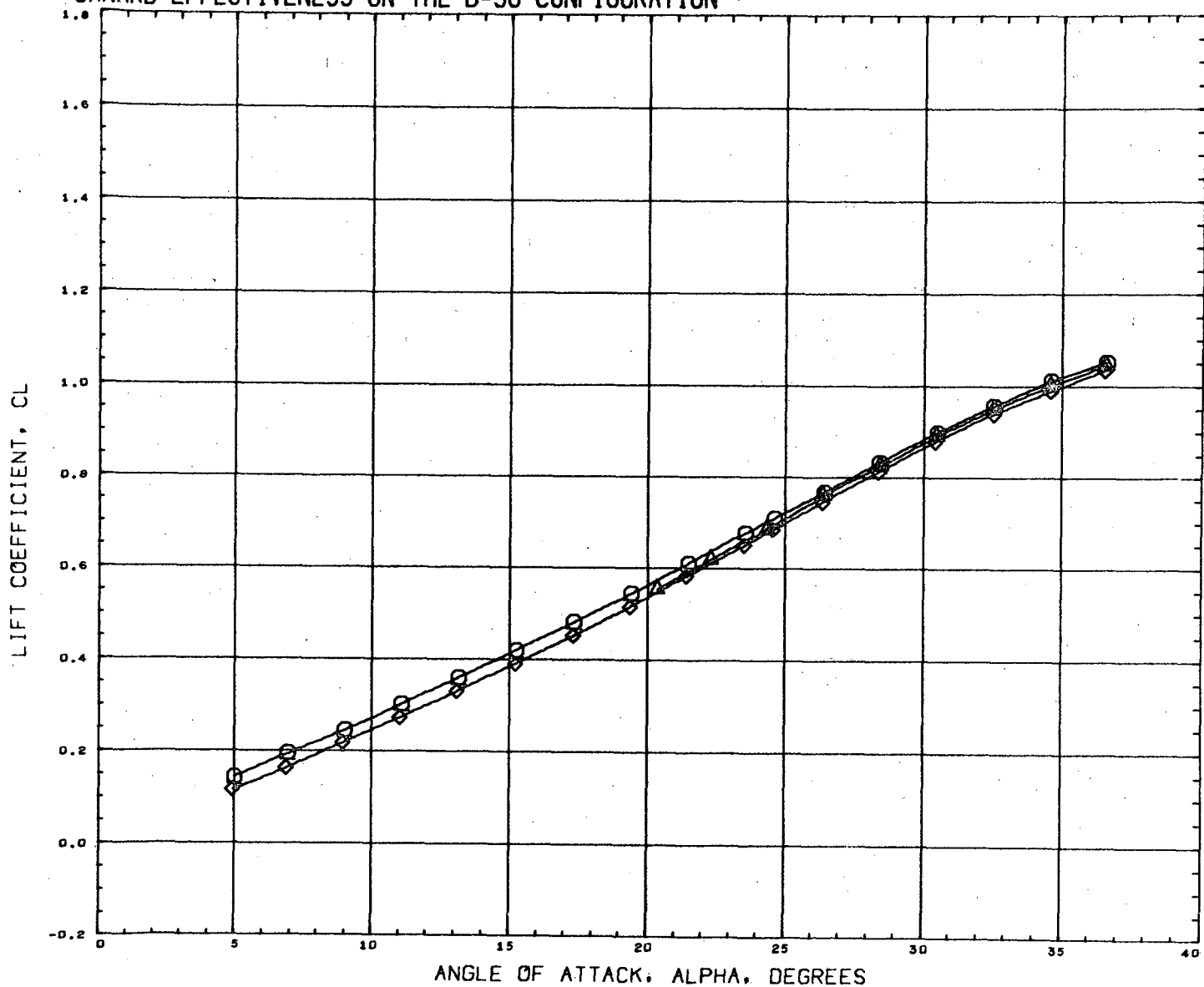


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION		
(E35ECB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040	50. IN.
(E35CBA)	MSFC TWT-493 GD/C B25W19C8 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120	IN.
(D35CCE)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0180	IN.
						XMRF	7.2990	IN.
						YMRF	0.0000	IN.
						ZMRF	0.0000	IN.
						SCALE	0.0035	

MACH 2.990

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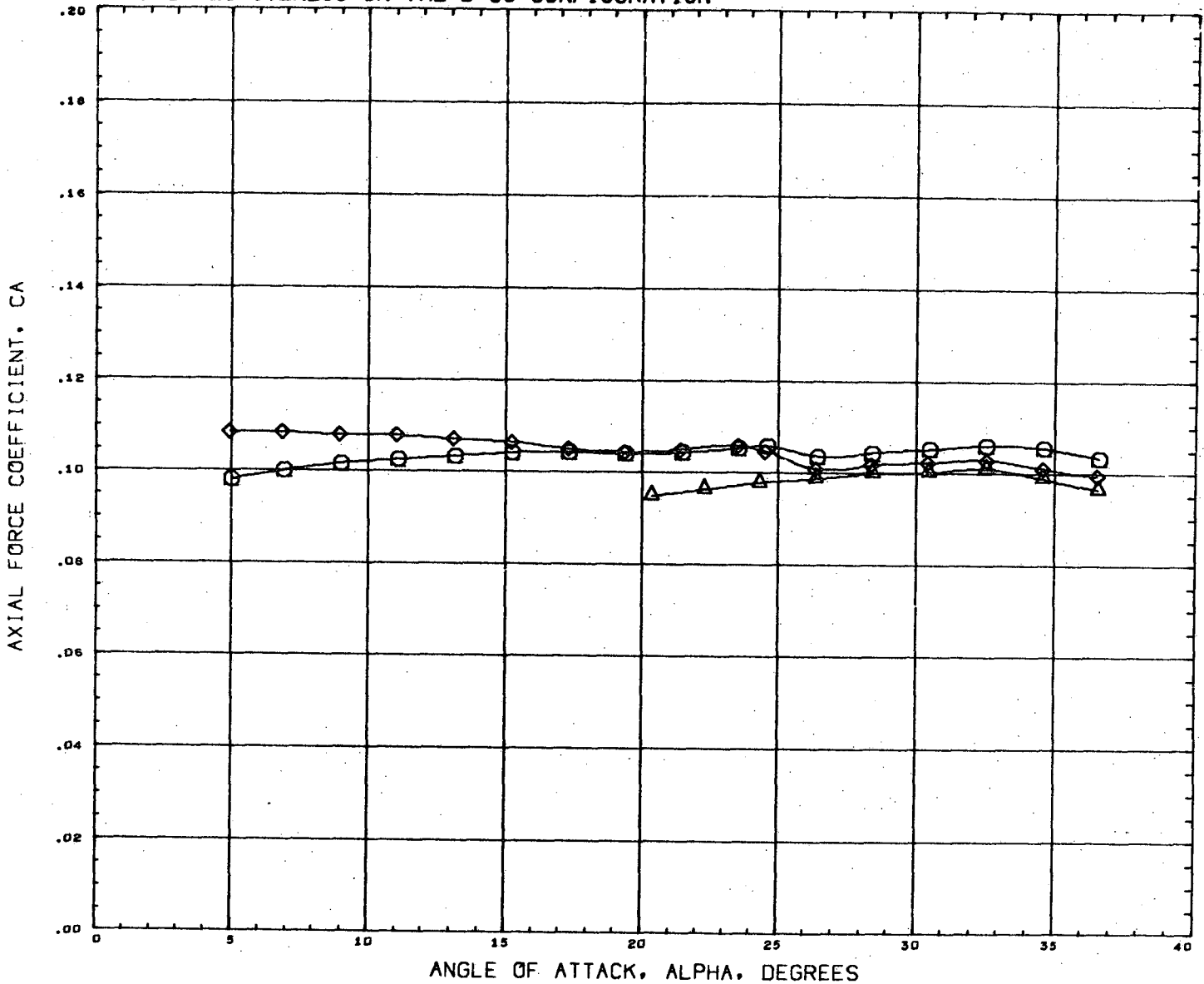
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35ECB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(E35CBA)	MSFC TWT-493 GD/C B25W19C8 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120 IN.
(D35CCE)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 2.990

CANARD EFFECTIVENESS ON THE B-90 CONFIGURATION



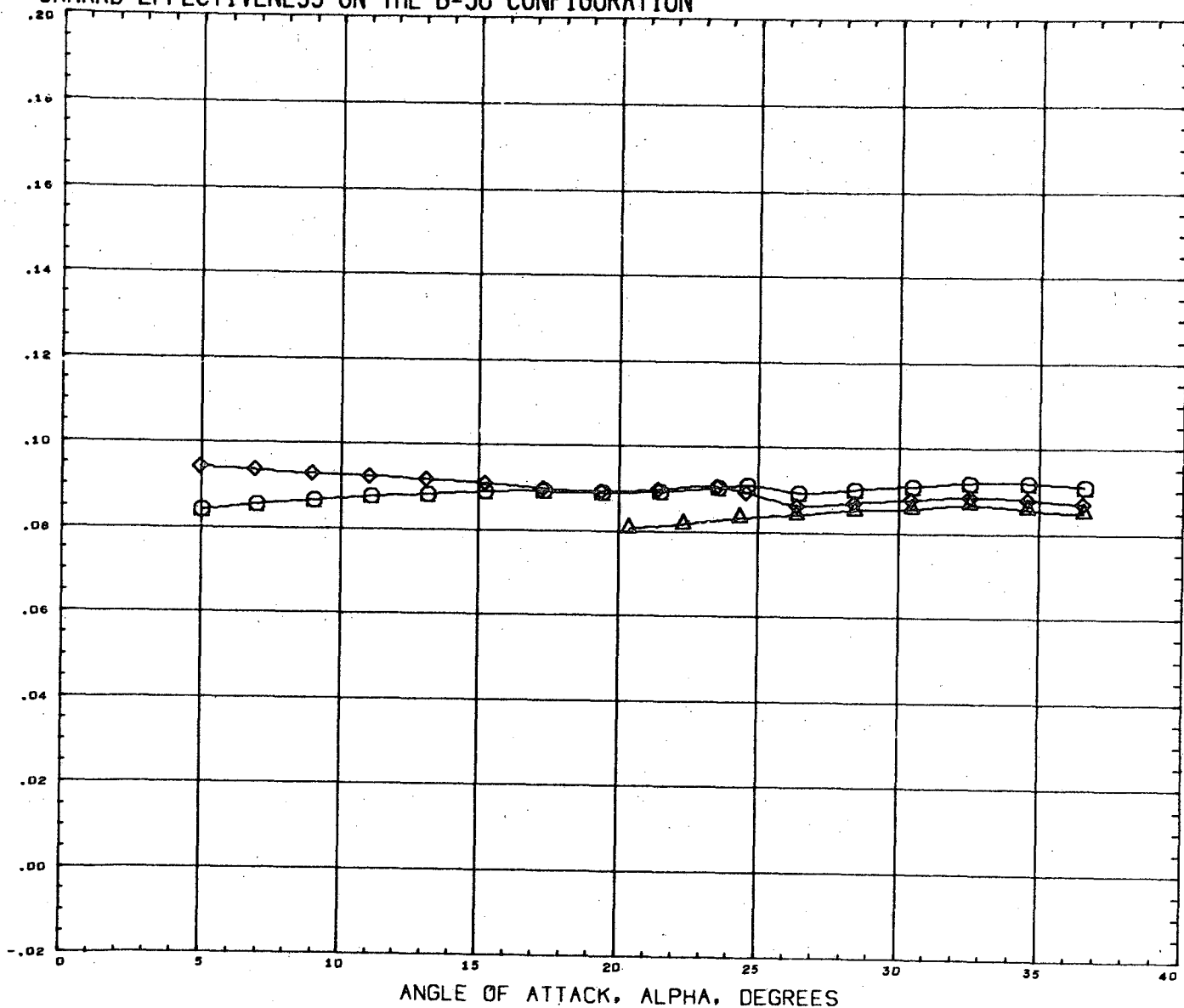
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35ECB)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 50. IN.
(E35CBA)	MSFC TWT-493 GD/C B25W19C8 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(D35CCE)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 2.990

C-3

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

FOREBODY AXIAL FORCE COEFFICIENT, CAF

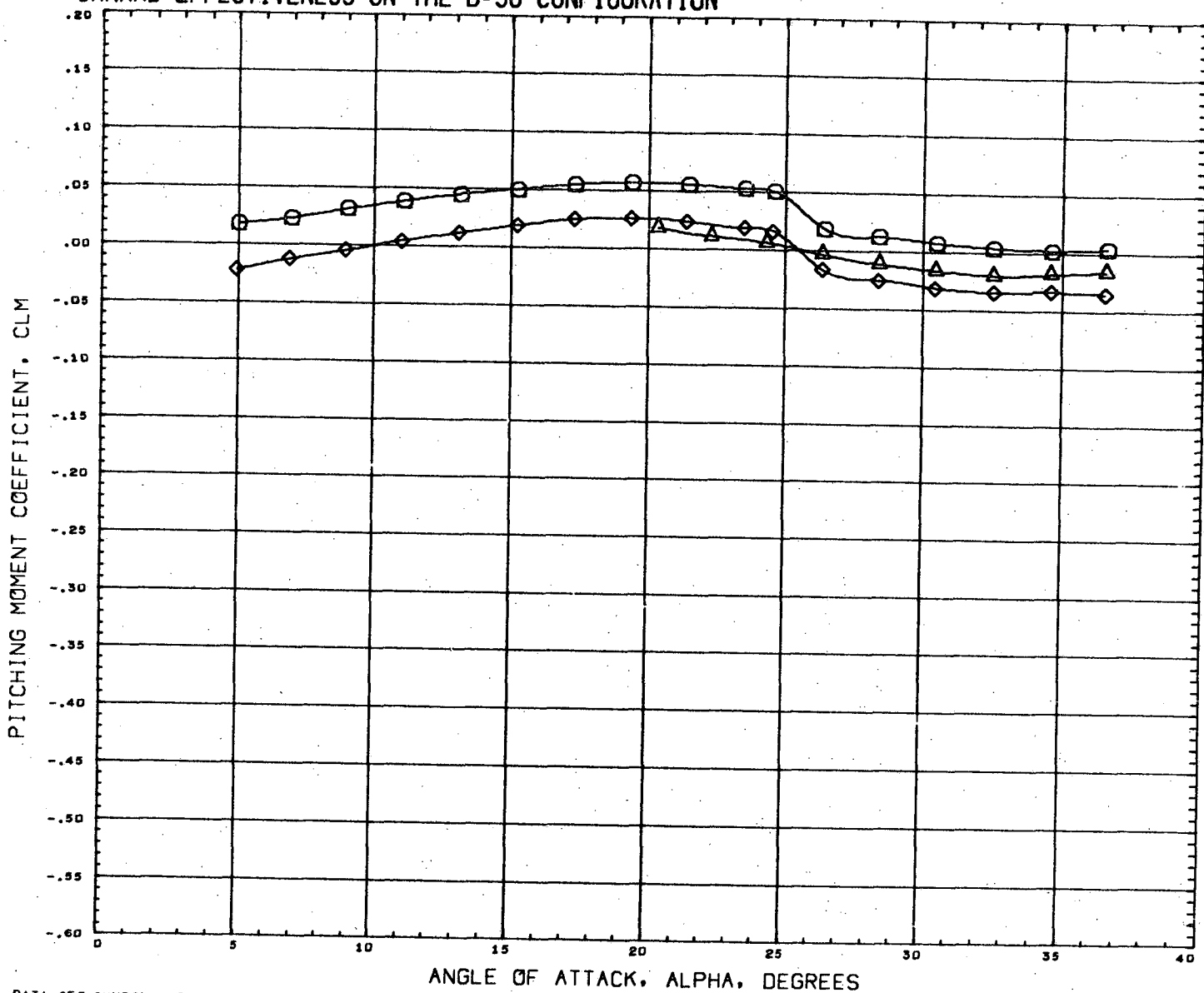


ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35ECB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35CBA)	MSFC TWT-493 GD/C B25W19C8 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(D35CCE)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 2.990

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35ECB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 sq. in.
(E35CBA)	MSFC TWT-493 GD/C B25W19C8 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 in.
(D35CCE)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0180 in.
						XMRF 7.2990 in.
						YMRF 0.0000 in.
						ZMRF 0.0000 in.
						SCALE 0.0035

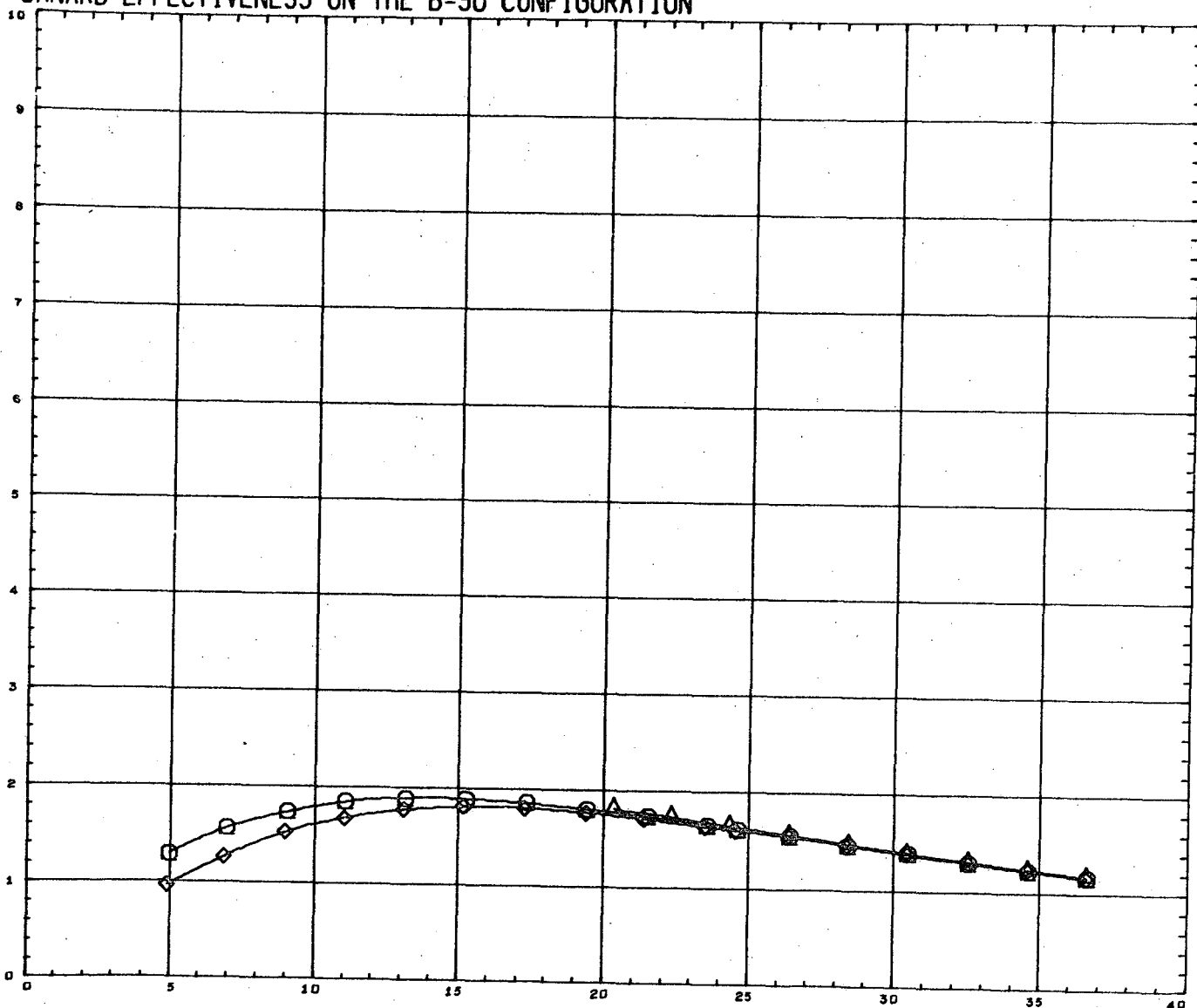
MACH 2.990

PAGE 140

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CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

LIFT-DRAG RATIO, L/D



ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL CONFIGURATION DESCRIPTION

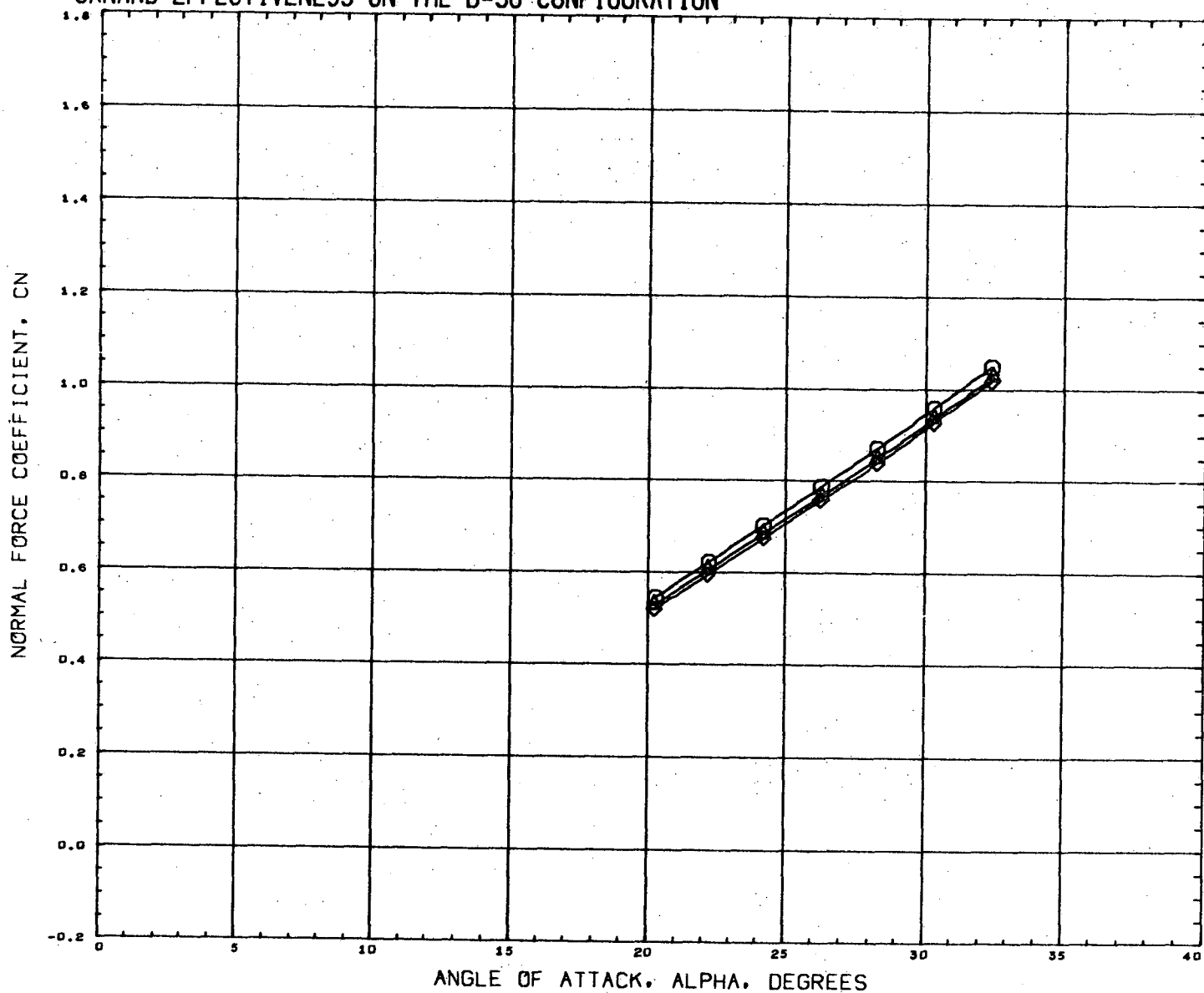
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER
(E35ECB)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=0 R=0	0.000	0.000	0.000	0.000
(E35CBA)	MSFC TWT-493 GD/C B25W19C8 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000
(D35CCE)	MSFC TWT-493 GD/C B25W19C8V1D E=0 C=-30 R=0	0.000	0.000	-30.000	0.000

REFERENCE INFORMATION

SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MACH 2.990

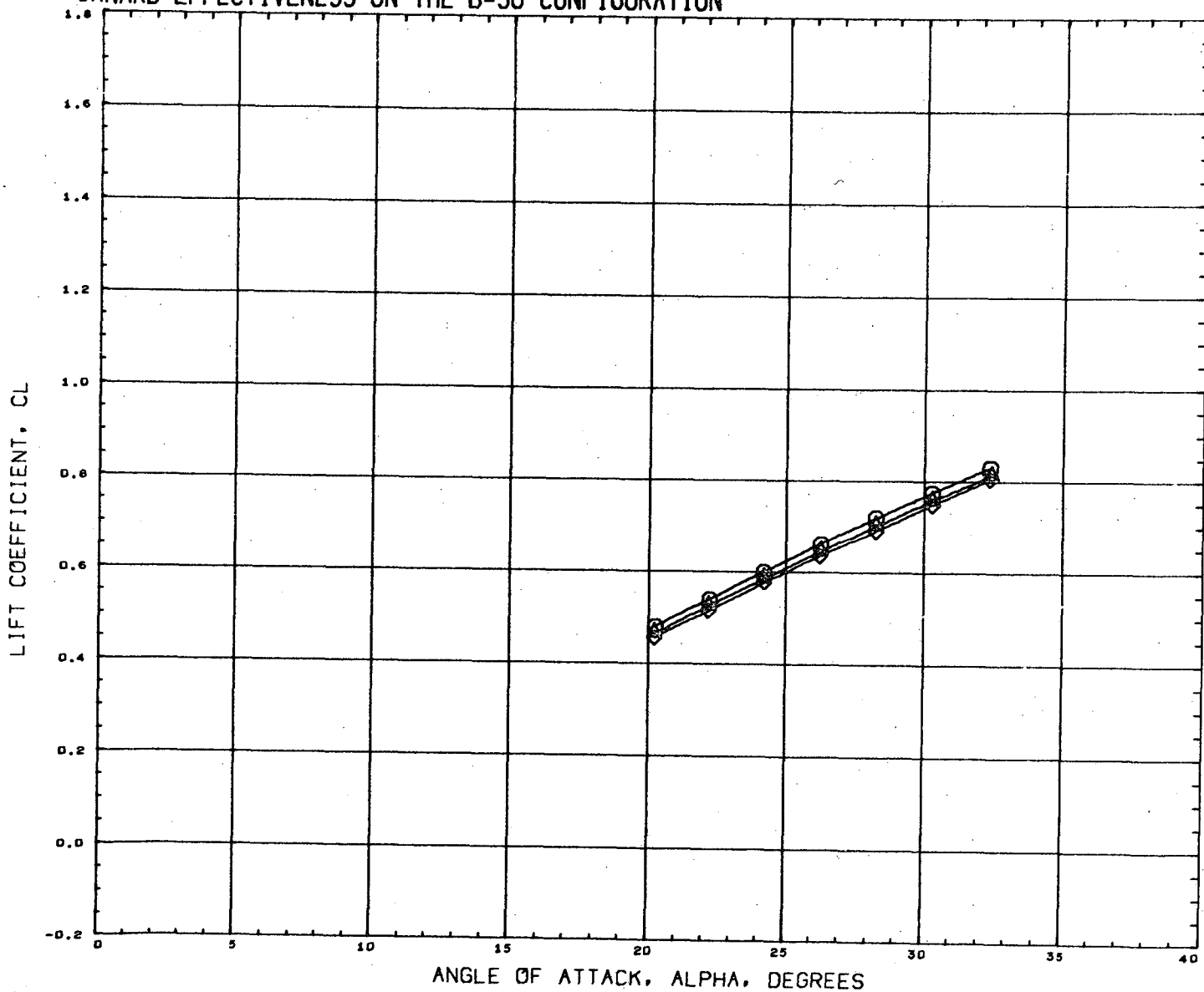
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EBO)	MSFC TWT-493 GD/C B25W19C8	E=0	C=0	R=0	0.000	SREF	14.9040 SQ. IN.
(F35CBA)	MSFC TWT-493 GD/C B25W19C8	E=0	C=-15	R=0	0.000	LREF	3.0120 IN.
(E35CBB)	MSFC TWT-493 GD/C B25W19C8	E=0	C=-30	R=0	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 4.450

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



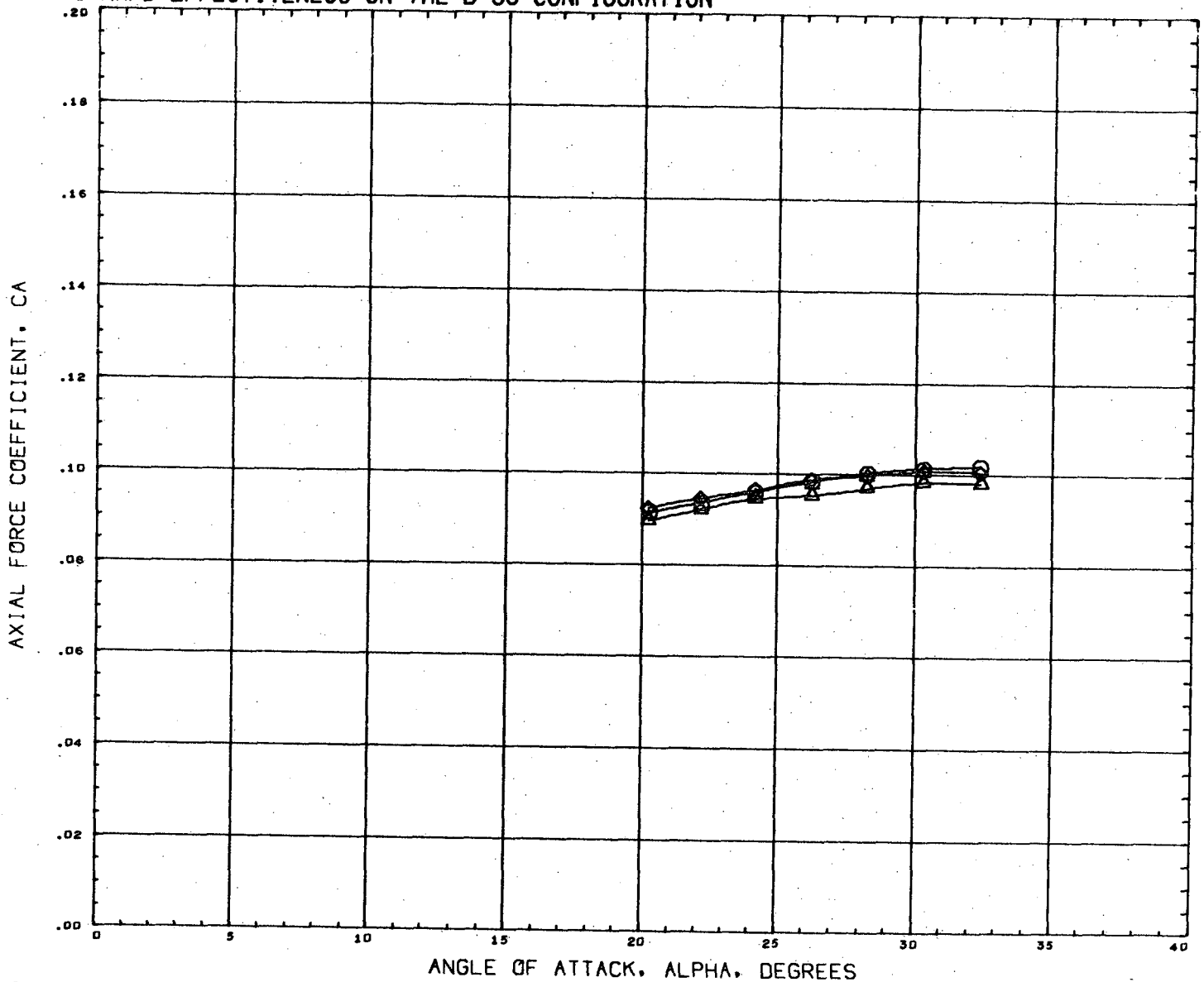
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E35EBO)	MSFC TWT-493 GD/C B25W19C8
(F35CBA)	MSFC TWT-493 GD/C B25W19C8
(E35CBB)	MSFC TWT-493 GD/C B25W19C8

BETA	ELEVON	CANARD	RUDDER
0.000	0.000	0.000	0.000
0.000	0.000	-15.000	0.000
0.000	0.000	-30.000	0.000

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

MACH 4.450

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



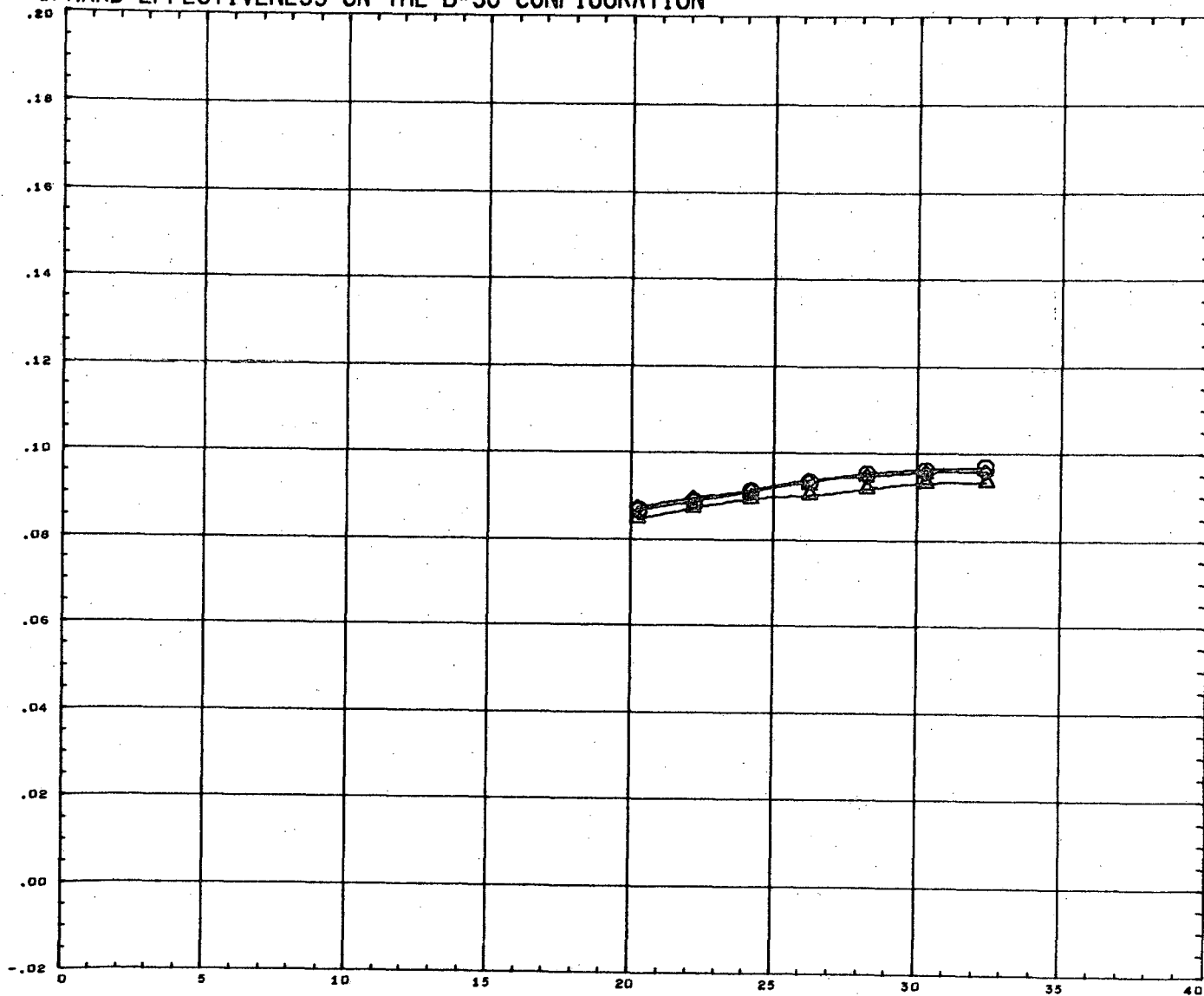
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EBO)	MSFC TWT-493 GD/C B25W19C8	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(F35CBA)	MSFC TWT-493 GD/C B25W19C8	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(E35CBB)	MSFC TWT-493 GD/C B25W19C8	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 4.450

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CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

FOREBODY AXIAL FORCE COEFFICIENT, CAF



ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E35EBO)	MSFC TWT-493 GD/C B25W19C8
(F35CBA)	MSFC TWT-493 GD/C B25W19C8
(E35CBB)	MSFC TWT-493 GD/C B25W19C8

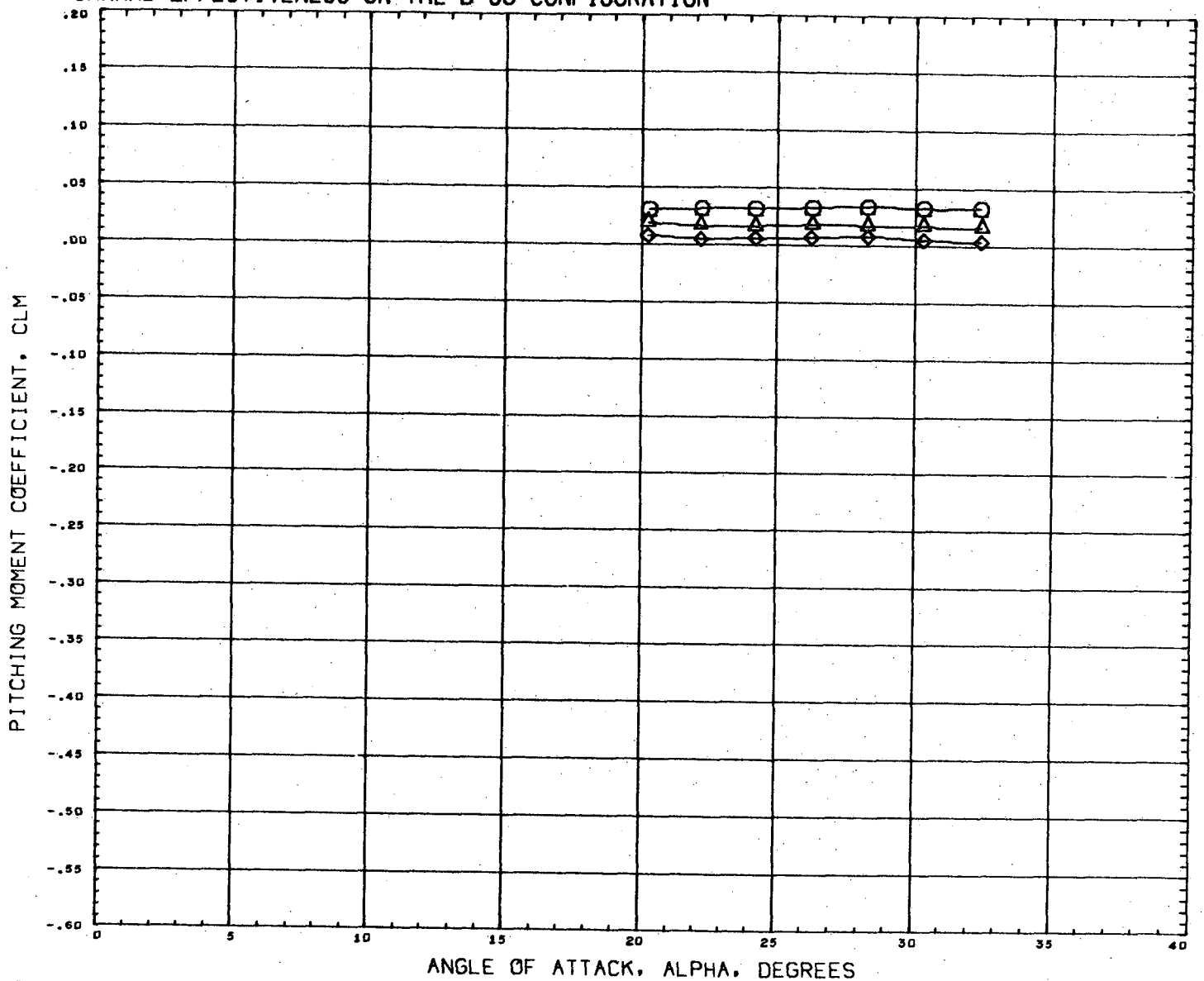
E	C	R
E=0	C=0	R=0
E=0	C=-15	R=0
E=0	C=-30	R=0

BETA	ELEVON	CANARD	RUDDER
0.000	0.000	0.000	0.000
0.000	0.000	-15.000	0.000
0.000	0.000	-30.000	0.000

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MACH 4.450

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

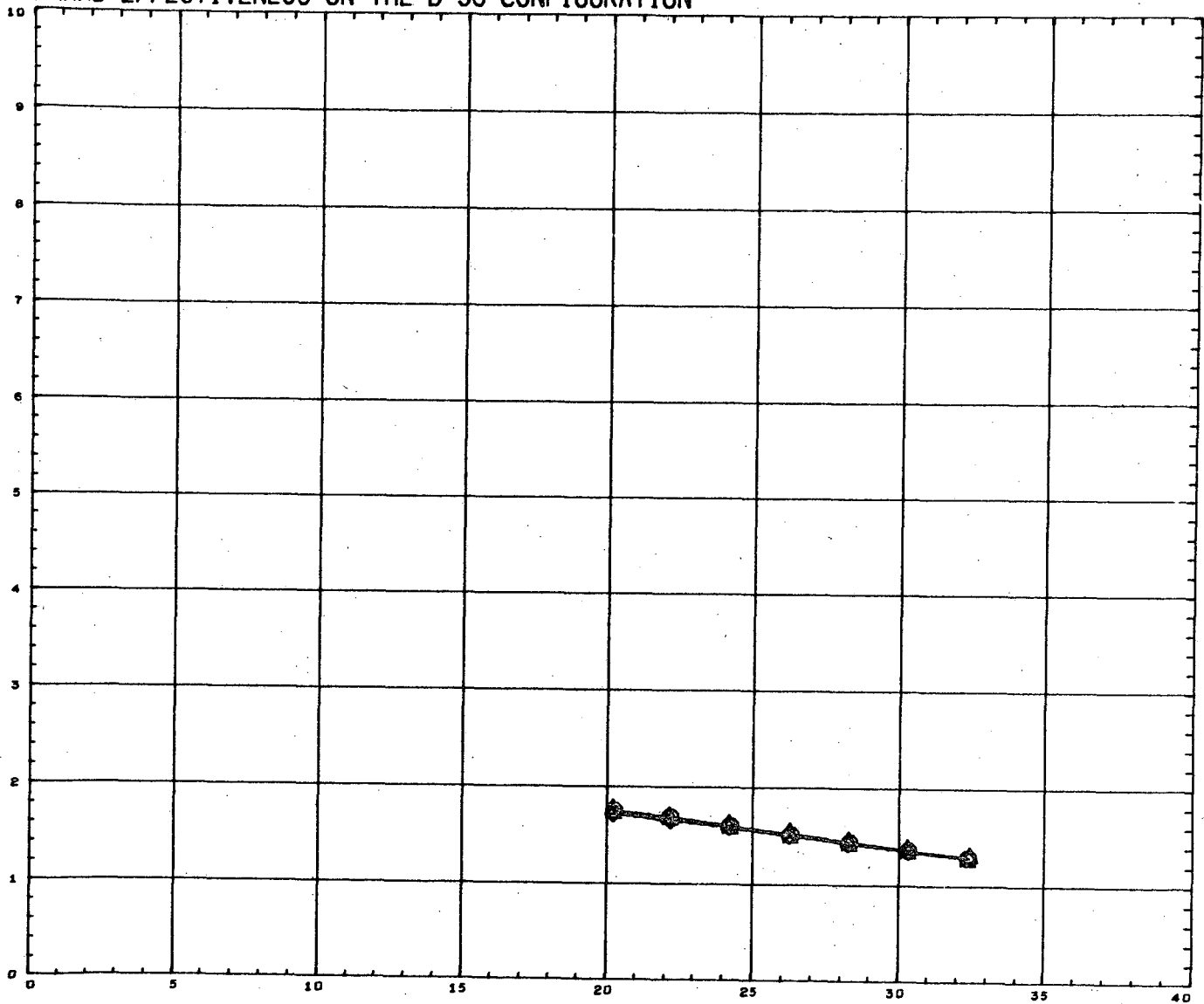


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(E35EBO)	MSFC TWT-493 GD/C B25W19C8	E=0 C=0 R=0	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(F35CBA)	MSFC TWT-493 GD/C B25W19C8	E=0 C=-15 R=0	0.000	0.000	0.000	LREF	3.0120 IN.
(E35CBB)	MSFC TWT-493 GD/C B25W19C8	E=0 C=-30 R=0	0.000	0.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 4.450

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

LIFT-DRAG RATIO, L/D



ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E35EBO)	MSFC TWT-493 GD/C B25W19C8
(F35CBA)	MSFC TWT-493 GD/C B25W19C8
(E35CBB)	MSFC TWT-493 GD/C B25W19C8

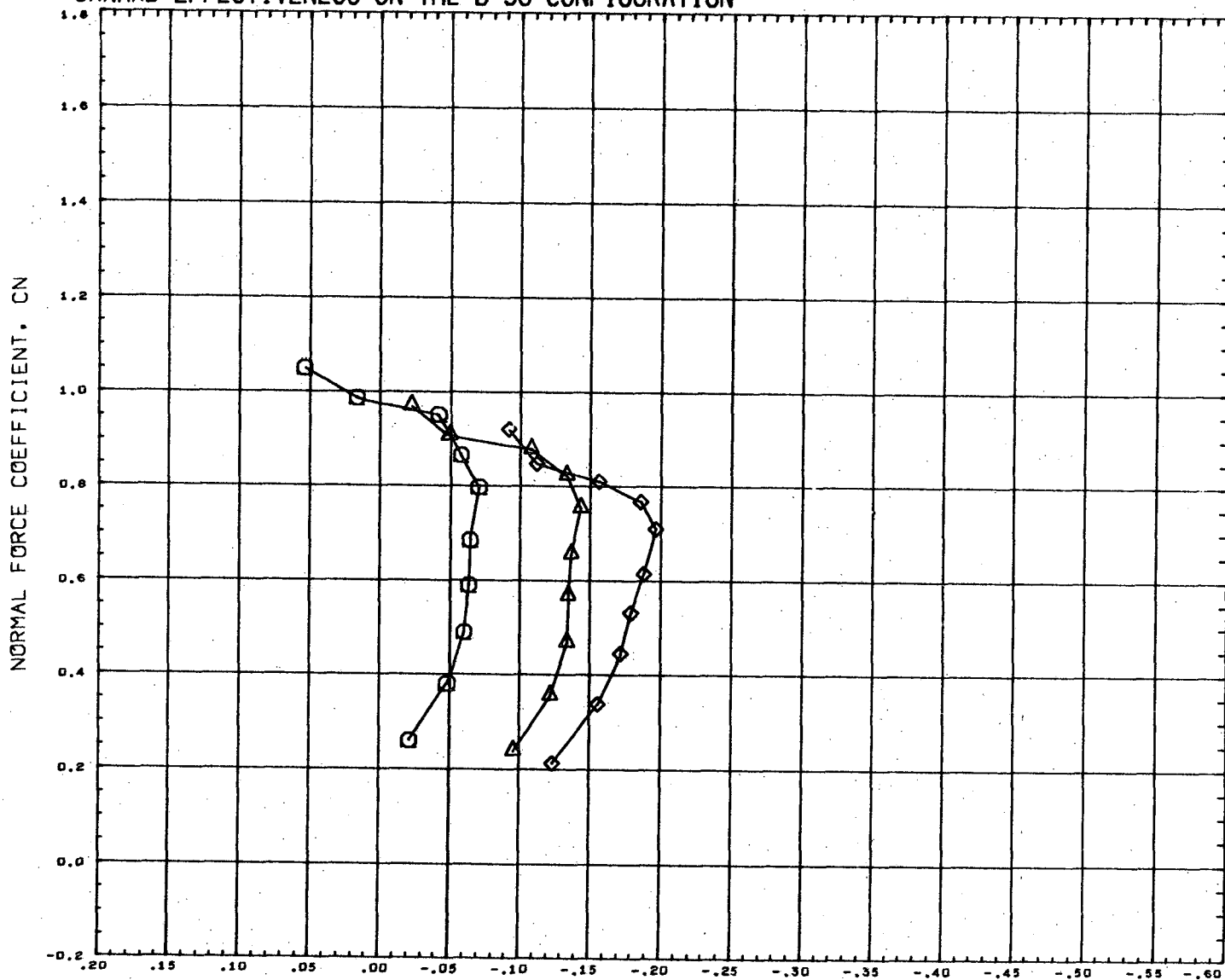
E=0	C=0	R=0
E=0	C=-15	R=0
E=0	C=-30	R=0

BETA	ELEVON	CANARD	RUDDER
0.000	0.000	0.000	0.000
0.000	0.000	-15.000	0.000
0.000	0.000	-30.000	0.000

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

MACH 4.450

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

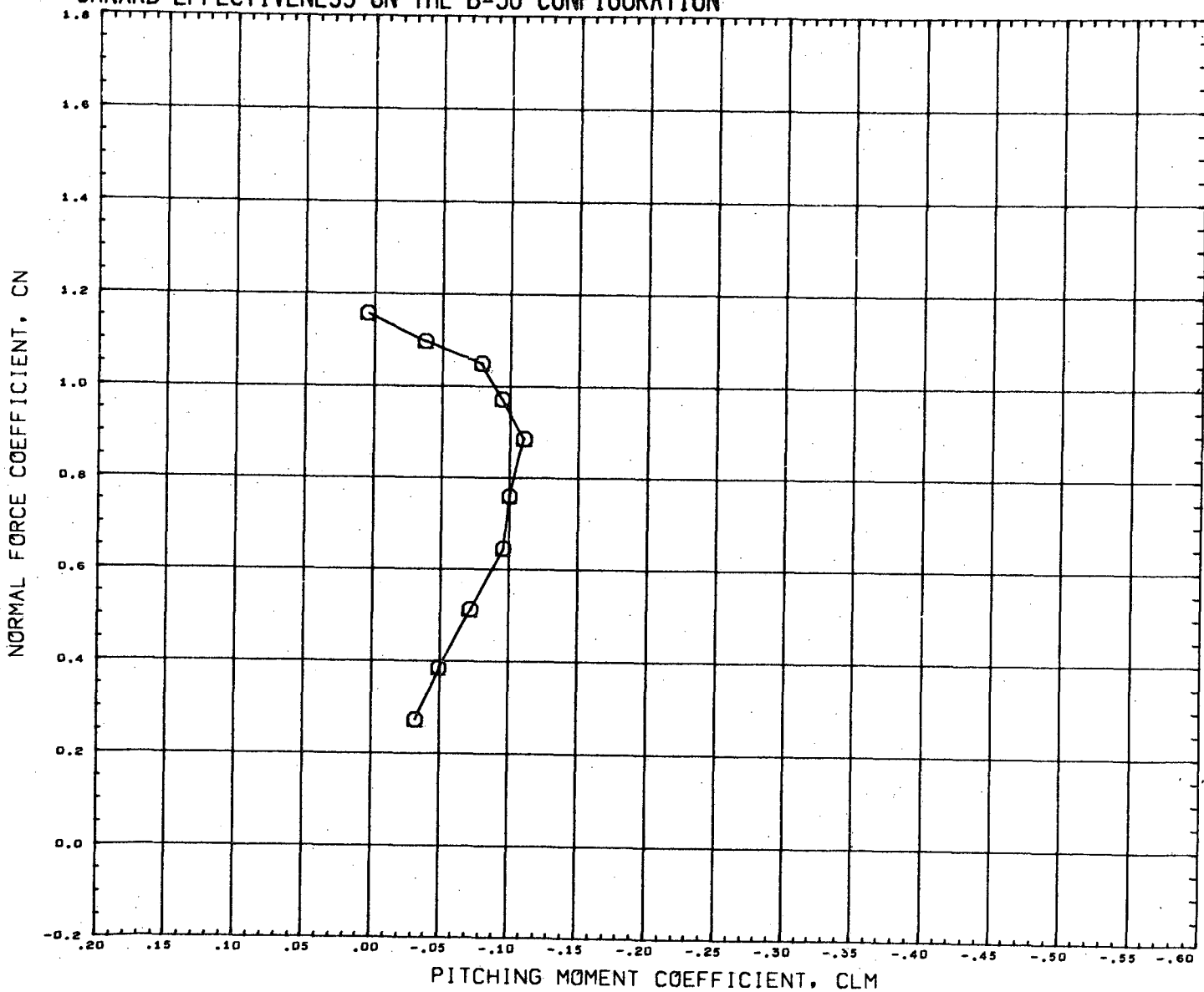


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION		
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040	50. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120	IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0180	IN.
						XMRP	7.2990	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0035	

MACH 0.899

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CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



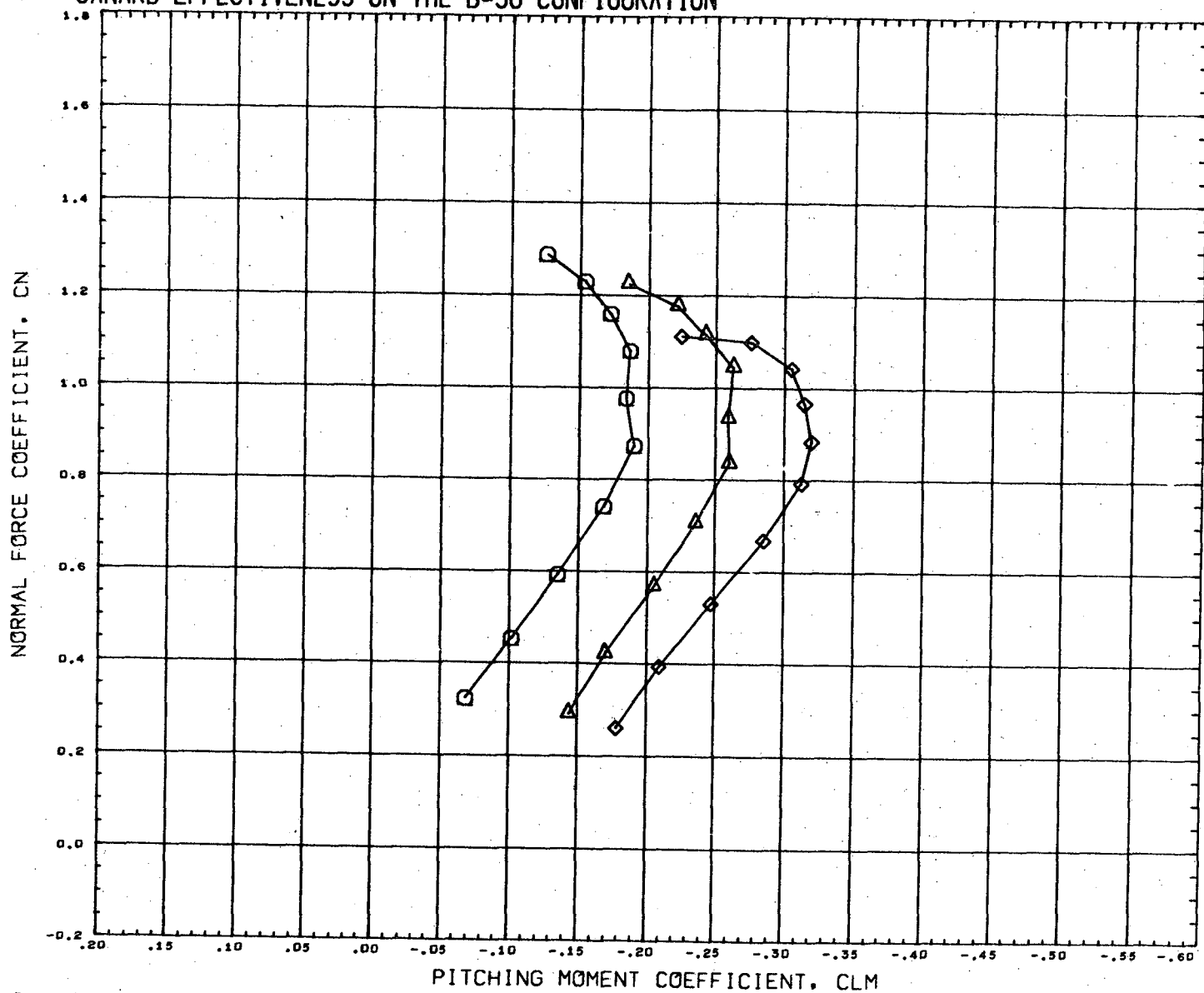
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(J35EAO) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0
 (D35CAA) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E35CAB) DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
				XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

MACH 0.961

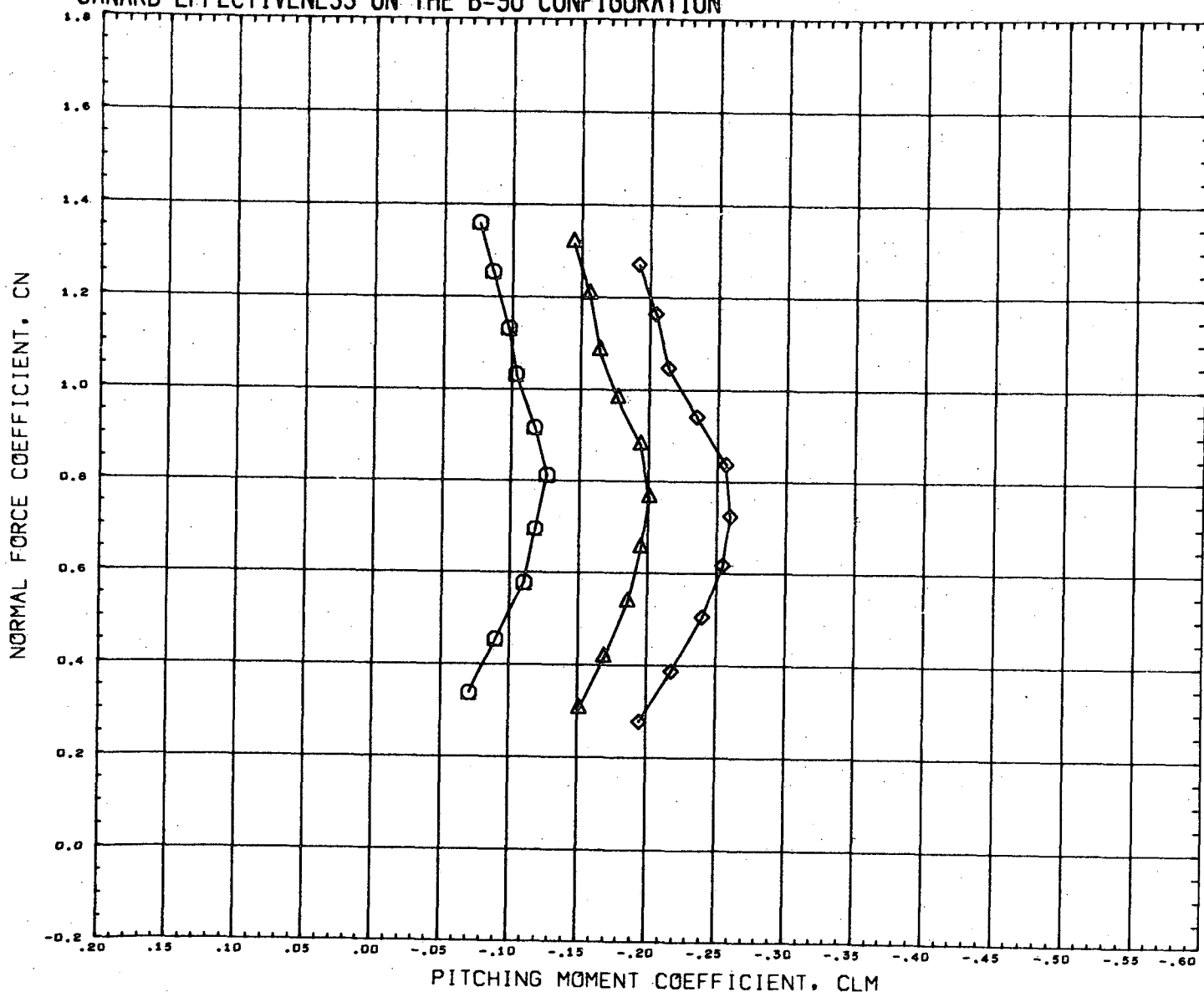
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V1D E=D C=D R=D	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V1D E=D C=-15 R=D	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V1D E=D C=-30 R=D	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.002

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

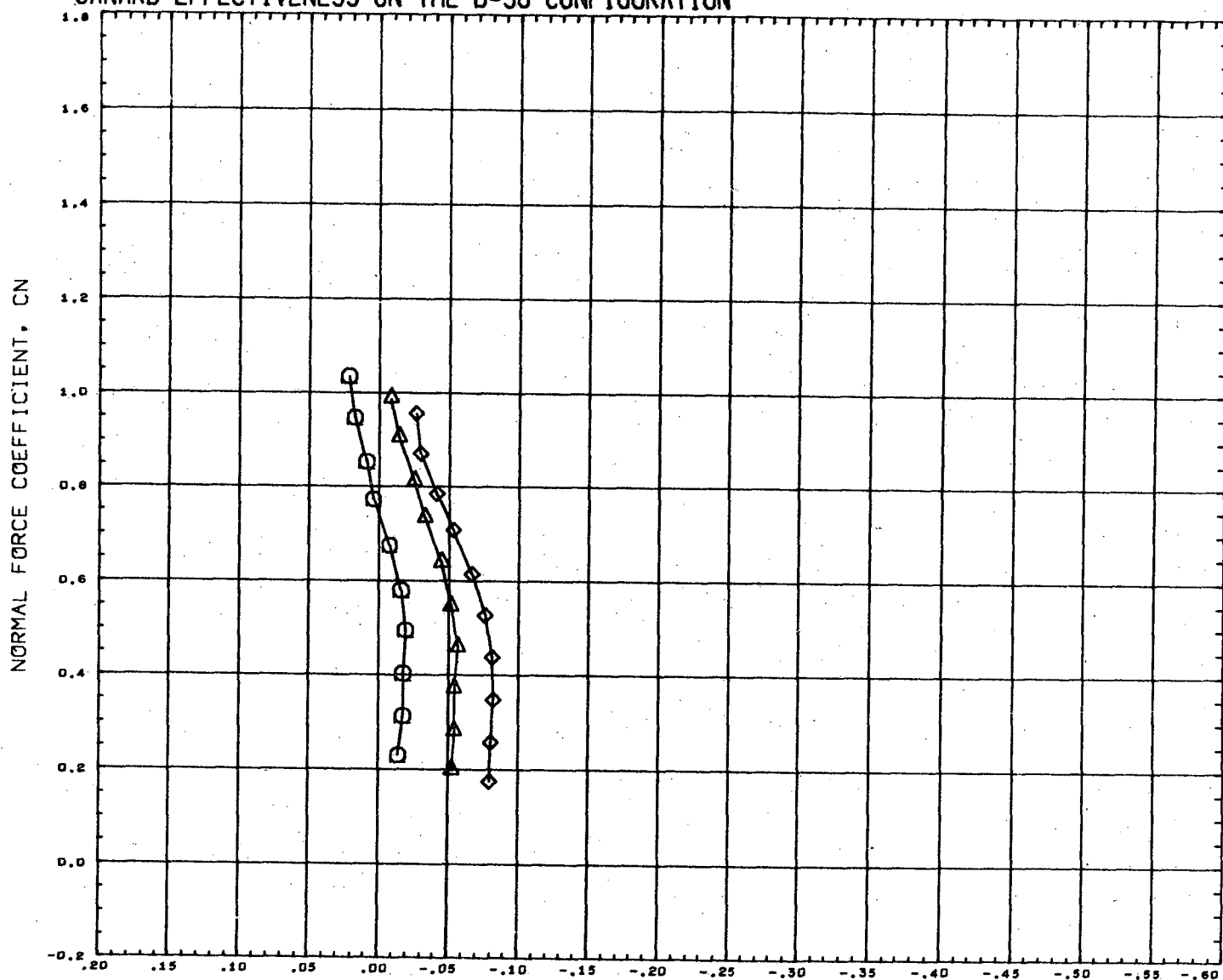


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 92 IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.194

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CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

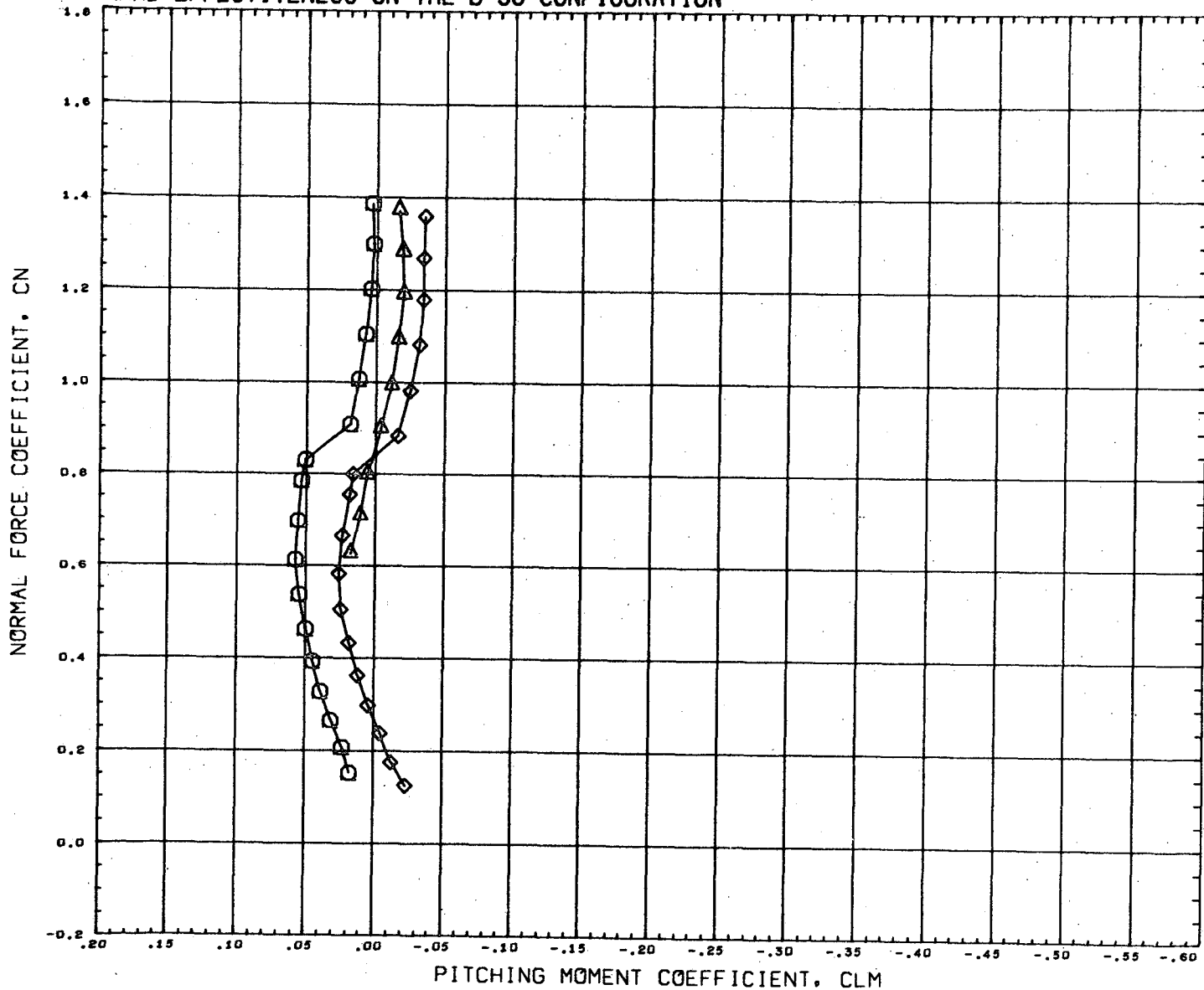


PITCHING MOMENT COEFFICIENT, CLM

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(J35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ.IN.
(D35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120 IN.
(E35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.953

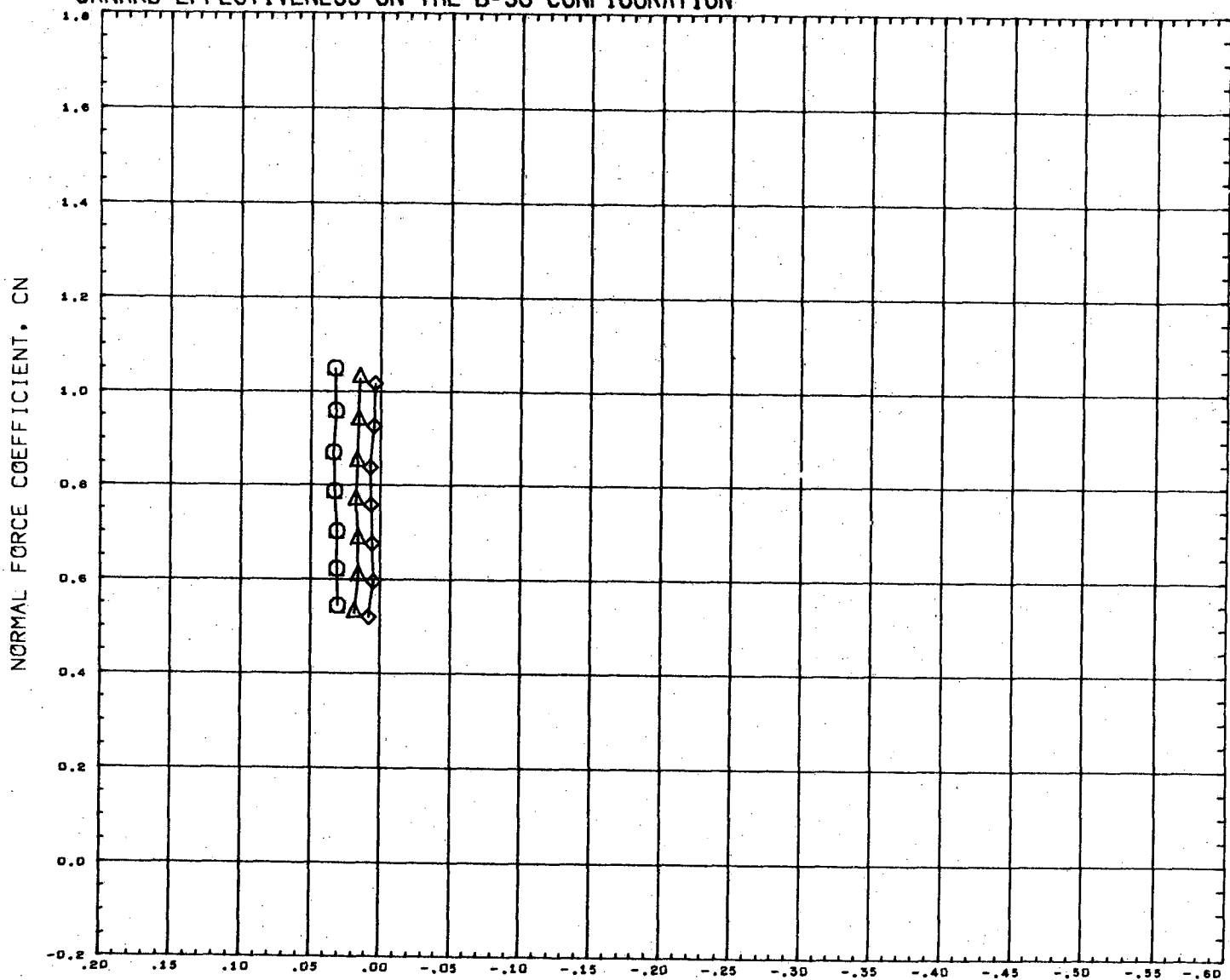
CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35ECB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(E35CBA)	MSFC TWT-493 GD/C B25W19C8 E=0 C=-15 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(D35CCE)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0160 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 2.990

CANARD EFFECTIVENESS ON THE B-9U CONFIGURATION

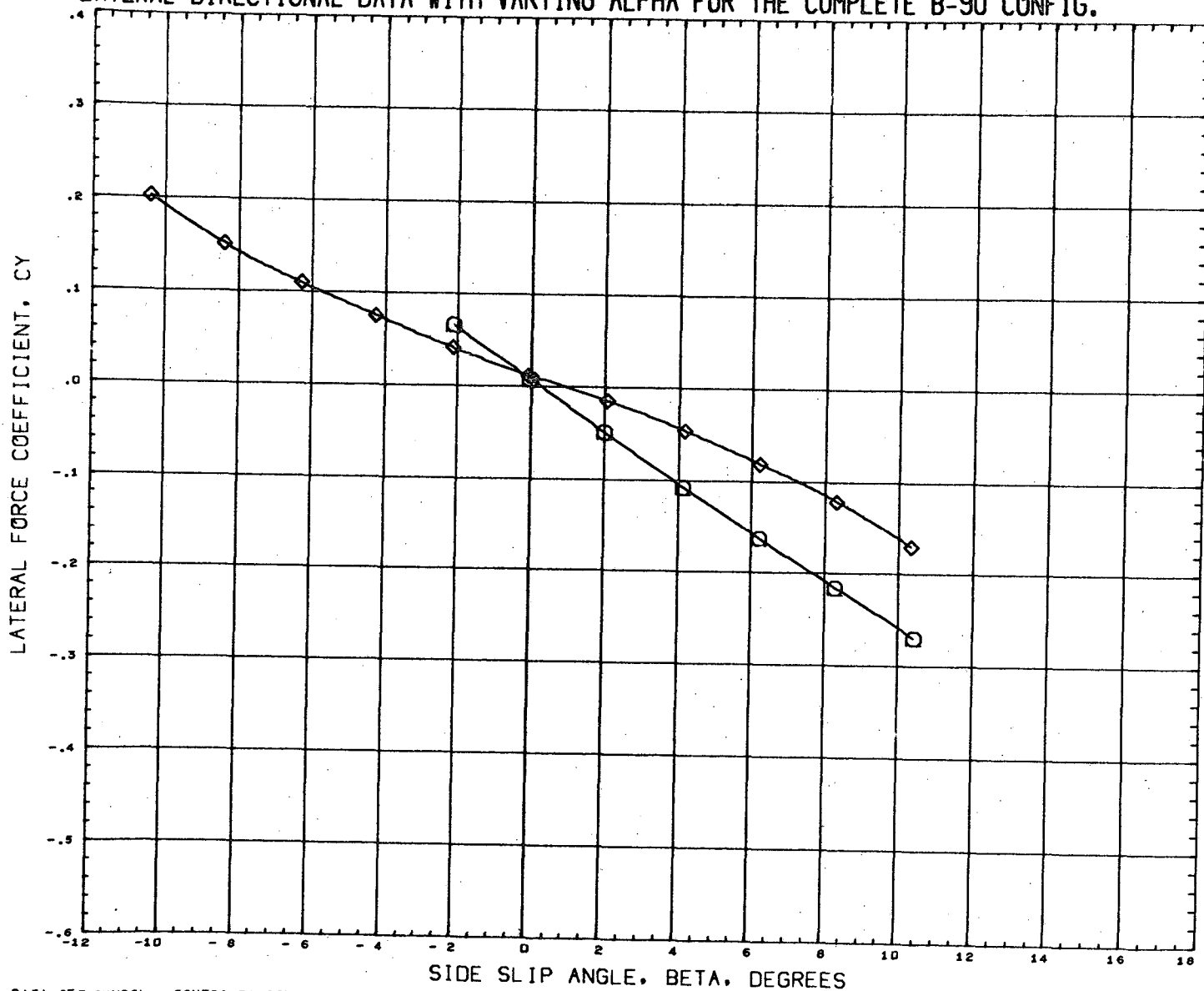


PITCHING MOMENT COEFFICIENT, CLM

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(E35EBO)	MSFC TWT-493 GD/C B25W19C8	E=0 C=0 R=0	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(F35CBA)	MSFC TWT-493 GD/C B25W19C8	E=0 C=-15 R=0	0.000	0.000	0.000	LREF 3.0120 IN.
(E35CBB)	MSFC TWT-493 GD/C B25W19C8	E=0 C=-30 R=0	0.000	0.000	0.000	BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 4.450

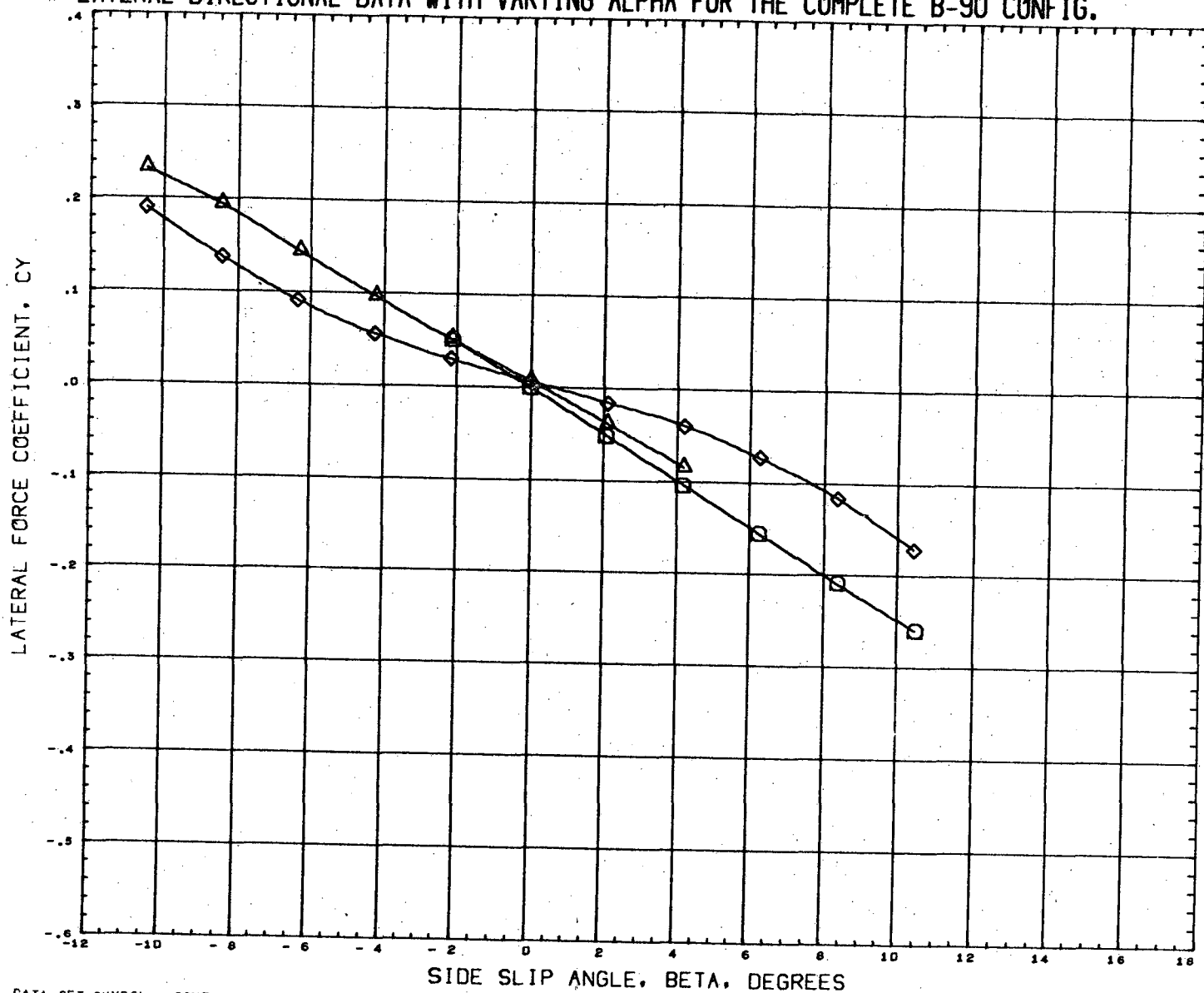
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-9U CONFIG.






DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V1D ALPHA=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A35TCD)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.000	0.000	0.000	0.000	LREF 3.0120 IN.
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V1D ALPHA=15 C=0 R=0	15.000	0.000	0.000	0.000	BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 0.996

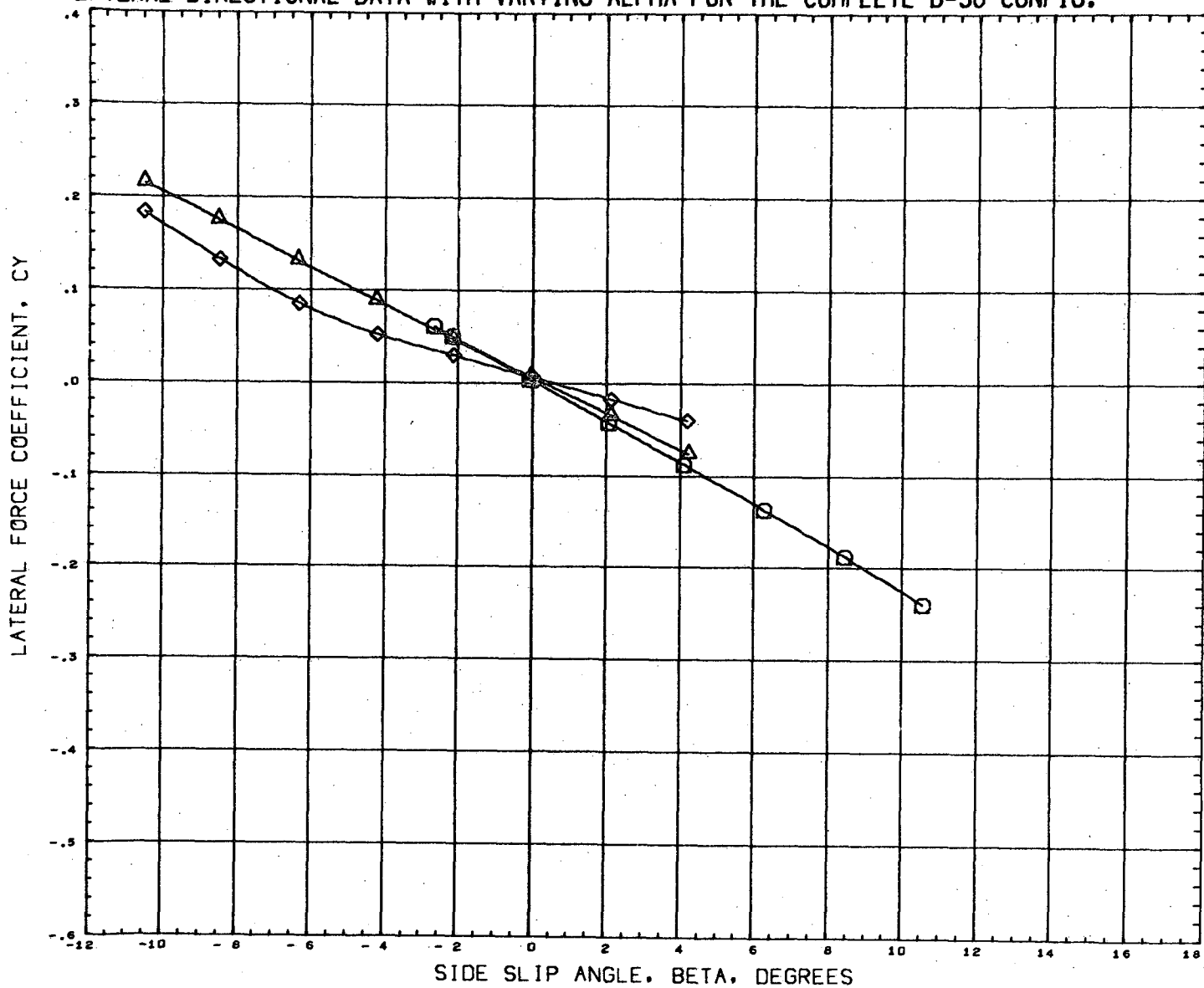
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-9U CONFIG.



DATA SET SYMBOL		CONFIGURATION DESCRIPTION		SIDE SET ANGLE, BETA, DEGREES					REFERENCE INFORMATION				
(B35TDA)		MSFC TWT-493 GD/C	B25W19C8V10	ALPHA=0	C=0	R=0	0.000	0.000	0.000	0.000	SREF	14.9040	SQ. IN.
(A35TCD)		MSFC TWT-493 GD/C	B25W19C8V10	ALPHA=6	C=0	R=0	6.000	0.000	0.000	0.000	LREF	3.0120	IN.
(A35TCC)		MSFC TWT-493 GD/C	B25W19C8V10	ALPHA=15	C=0	R=0	15.000	0.000	0.000	0.000	BREF	6.0180	IN.
											XMRF	7.2990	IN.
											YMRF	0.0000	IN.
											ZMRF	0.0000	IN.
											SCALE	0.0035	
MACH		1.197											

MACH 1.197

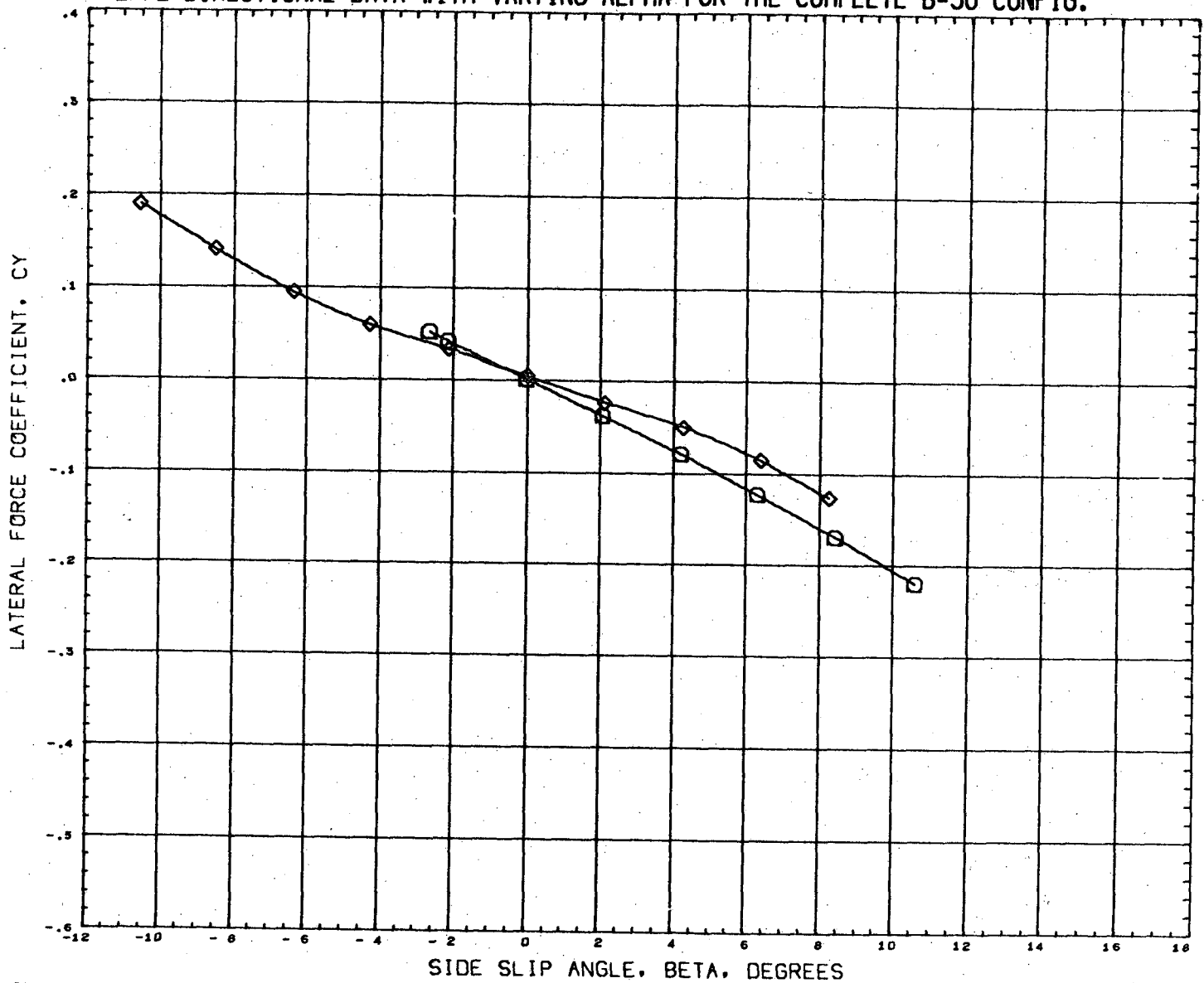
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-9U CONFIG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=0 C=0 R=0	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A35TCD)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=6 C=0 R=0	6.000	0.000	0.000	LREF	3.0120 IN.
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=15 C=0 R=0	15.000	0.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.464

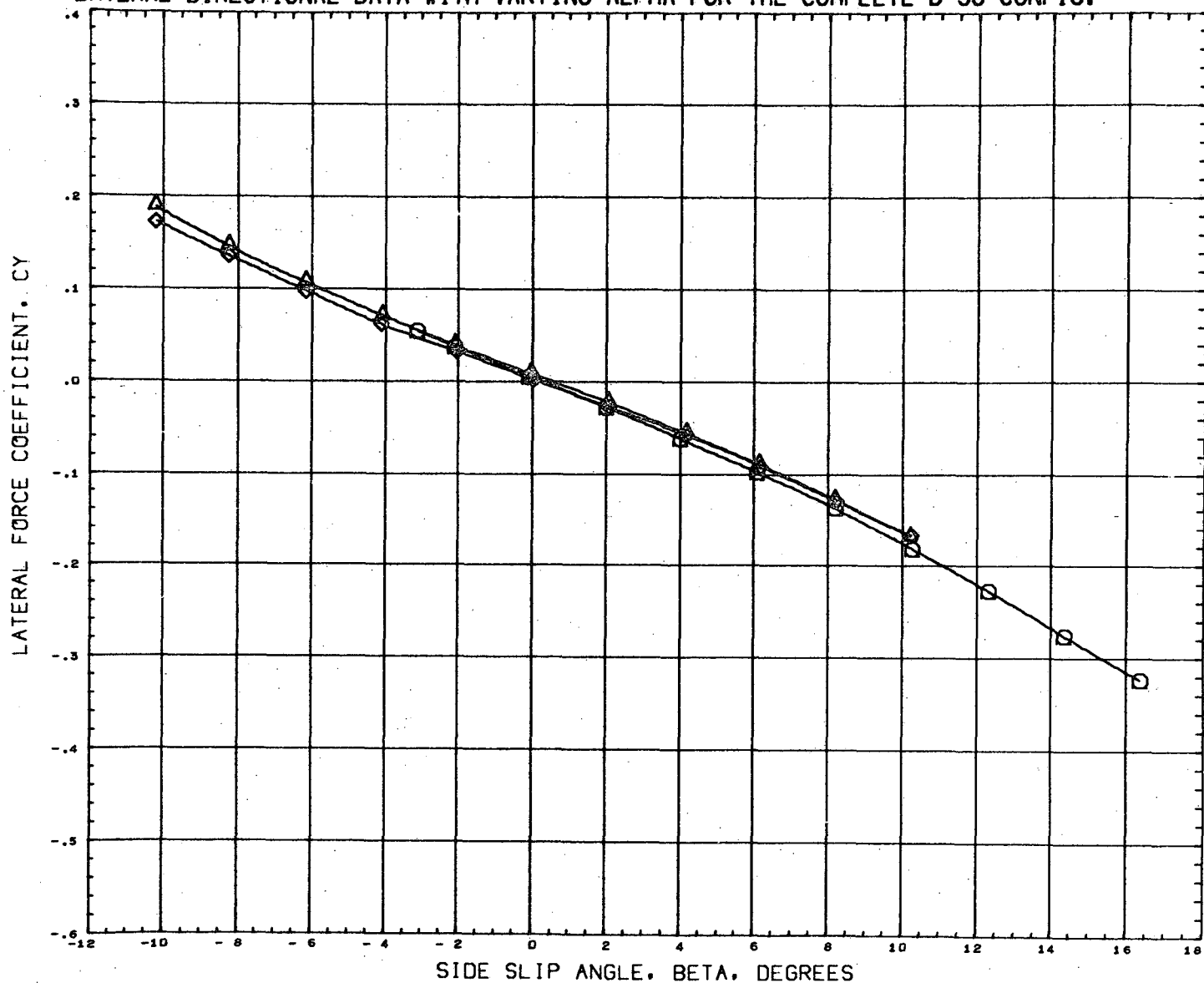
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-9U CONFIG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=D R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A35TCD)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.000	0.000	0.000	0.000	LREF	3.0120 IN.
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D R=0	15.000	0.000	0.000	0.000	BREF	6.0180 IN.
						XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

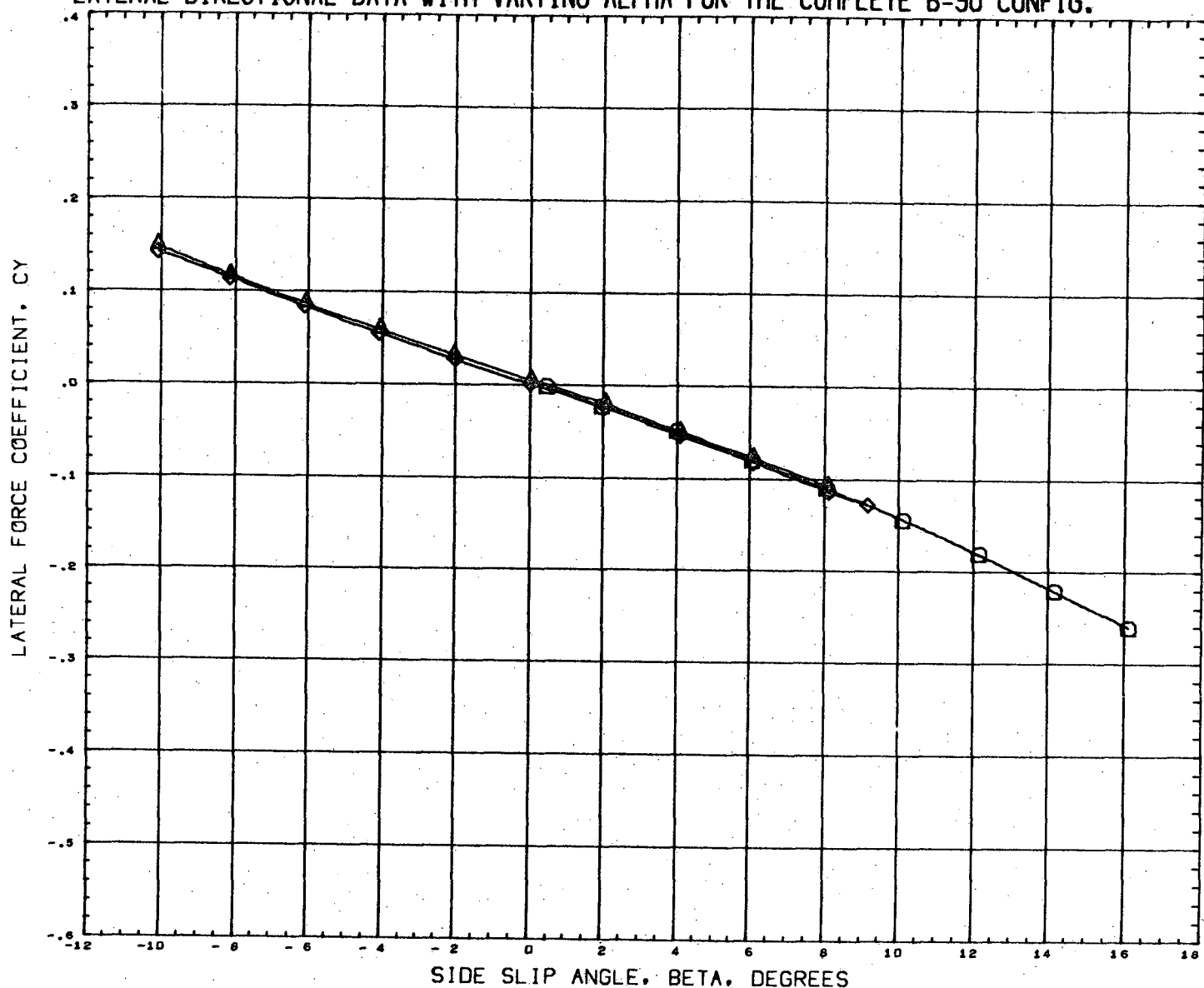
MACH 1.950

LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-90 CONFIG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION				ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(B35TDA)	MSFC	TWT-493	GD/C	B25W19C8V10	ALPHA=0	C=0 R=0	0.000	0.000	0.000	SREF 14.9040 sq. in.
(A35TCD)	MSFC	TWT-493	GD/C	B25W19C8V10	ALPHA=6	C=0 R=0	6.000	0.000	0.000	LREF 3.0120 in.
(A35TCC)	MSFC	TWT-493	GD/C	B25W19C8V10	ALPHA=15	C=0 R=0	15.000	0.000	0.000	BREF 6.0180 in.
										XMRP 7.2990 in.
										YMRP 0.0000 in.
										ZMRP 0.0000 in.
										SCALE 0.0035
MACH	2.990									

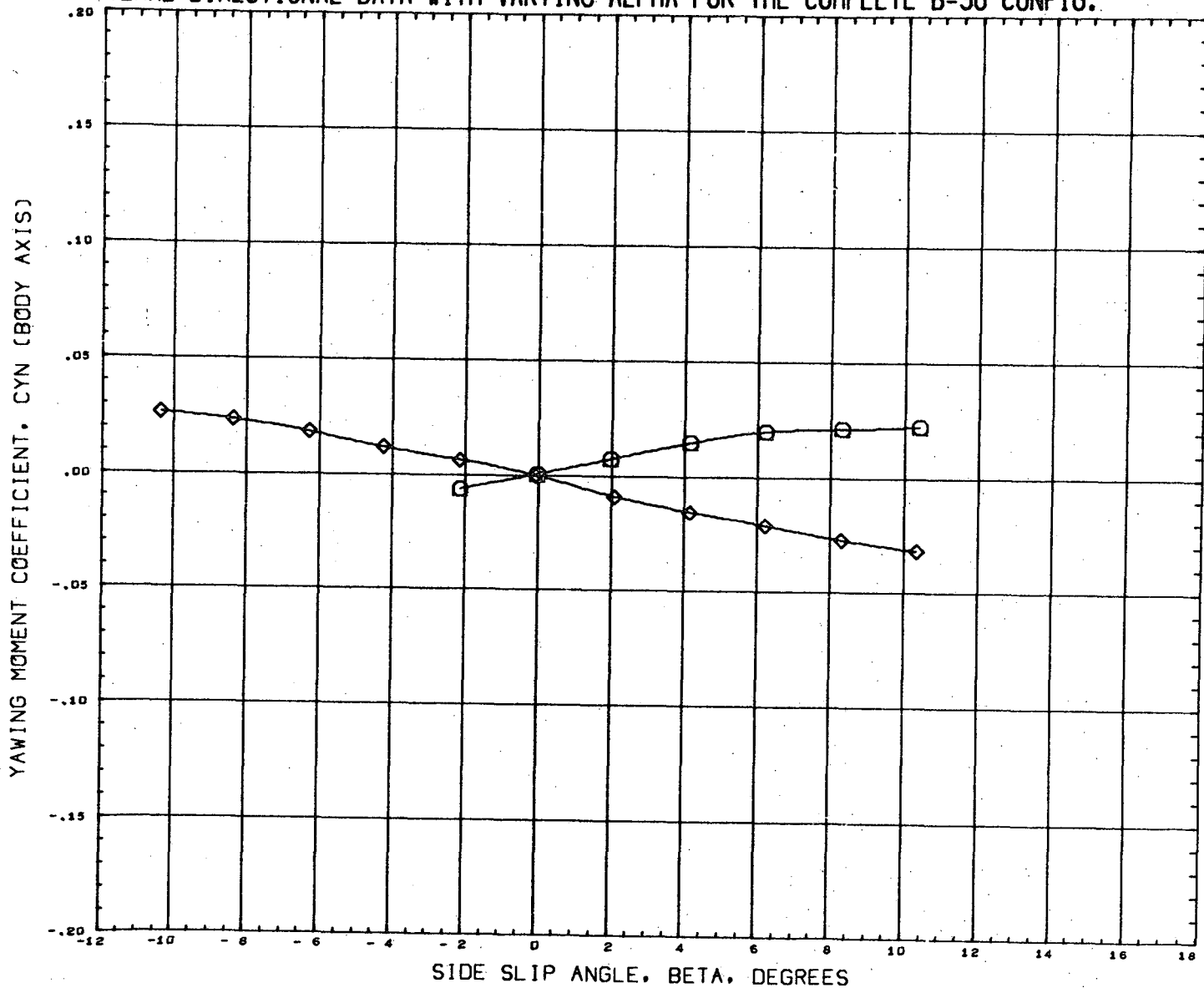
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-9U CONFIG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=D R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ.IN.
(A35TCD)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=6 C=D R=0	6.000	0.000	0.000	0.000	LREF	3.0120 IN.
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D R=0	15.000	0.000	0.000	0.000	BREF	6.0180 IN.
						XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 4.959

LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-90 CONFIG.



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B35TDA) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=D R=D
 (A35TCD) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (A35TCC) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D R=D

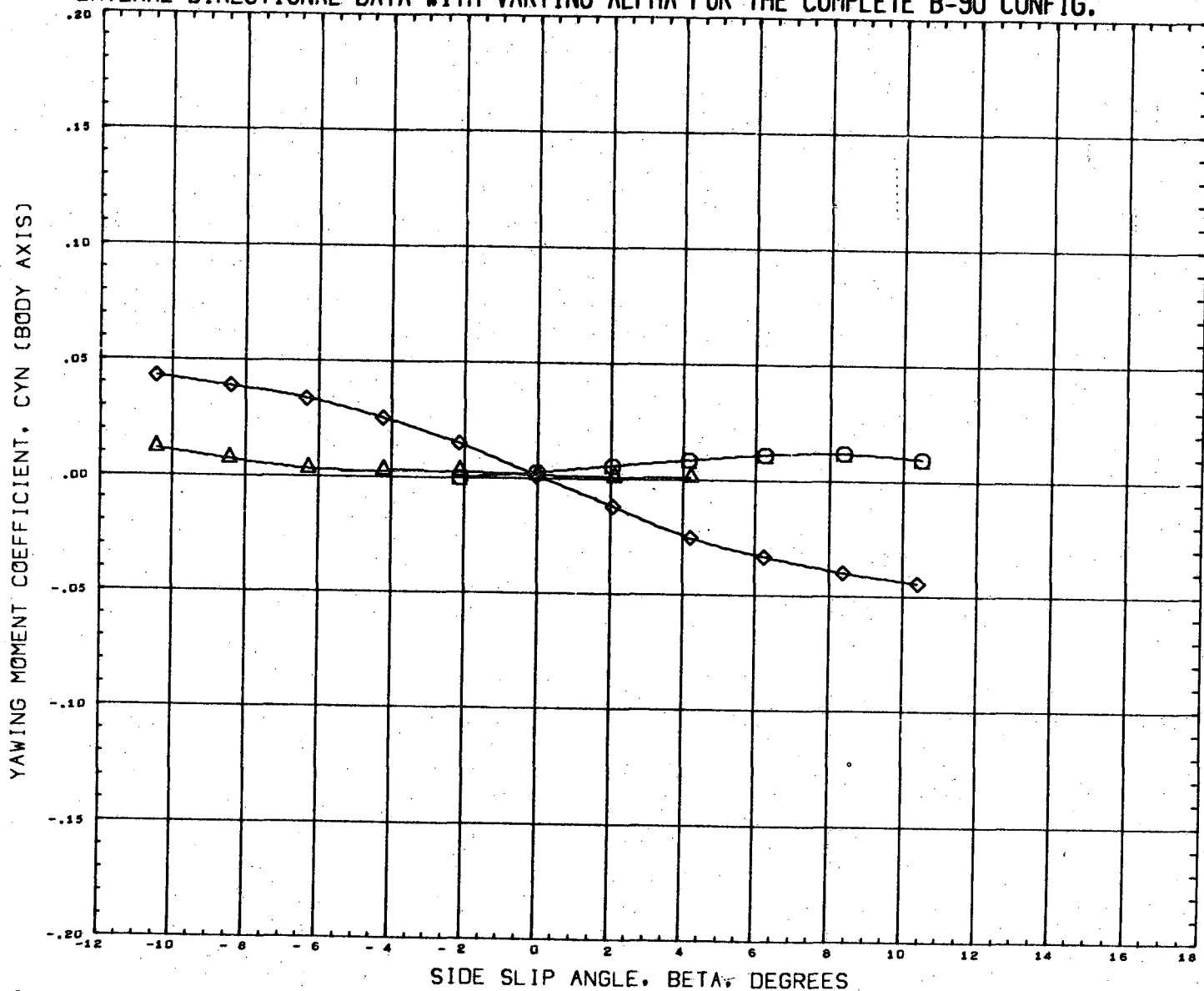
ALPHA	ELEVON	CANARD	RUDDER
0.000	0.000	0.000	0.000
6.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000

REFERENCE INFORMATION

SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

MACH 0.996

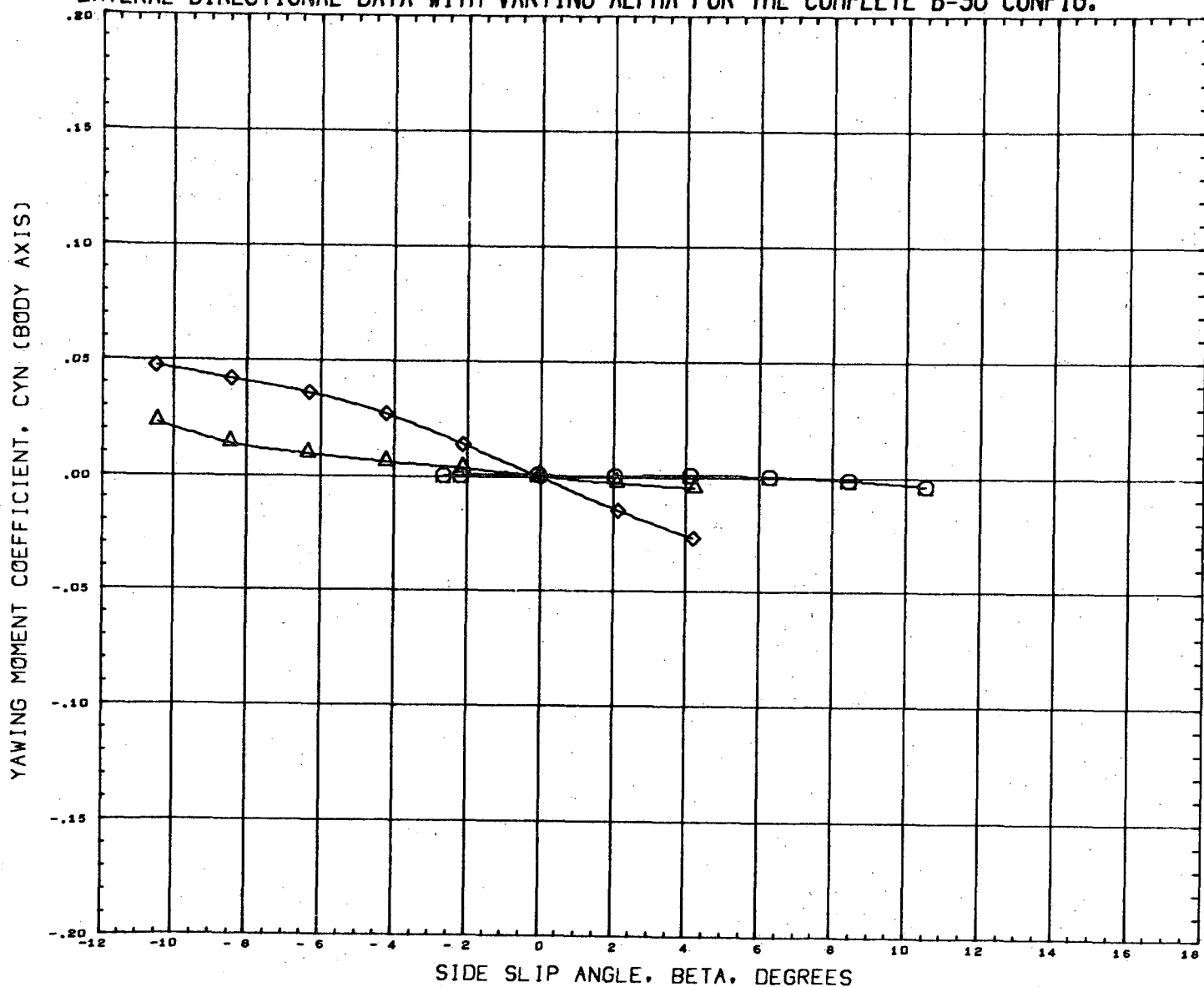
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-90 CONFIG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A35TCD)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=6 C=0 R=0	6.000	0.000	0.000	0.000	LREF 3.0120 IN.
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=0 R=0	15.000	0.000	0.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.197

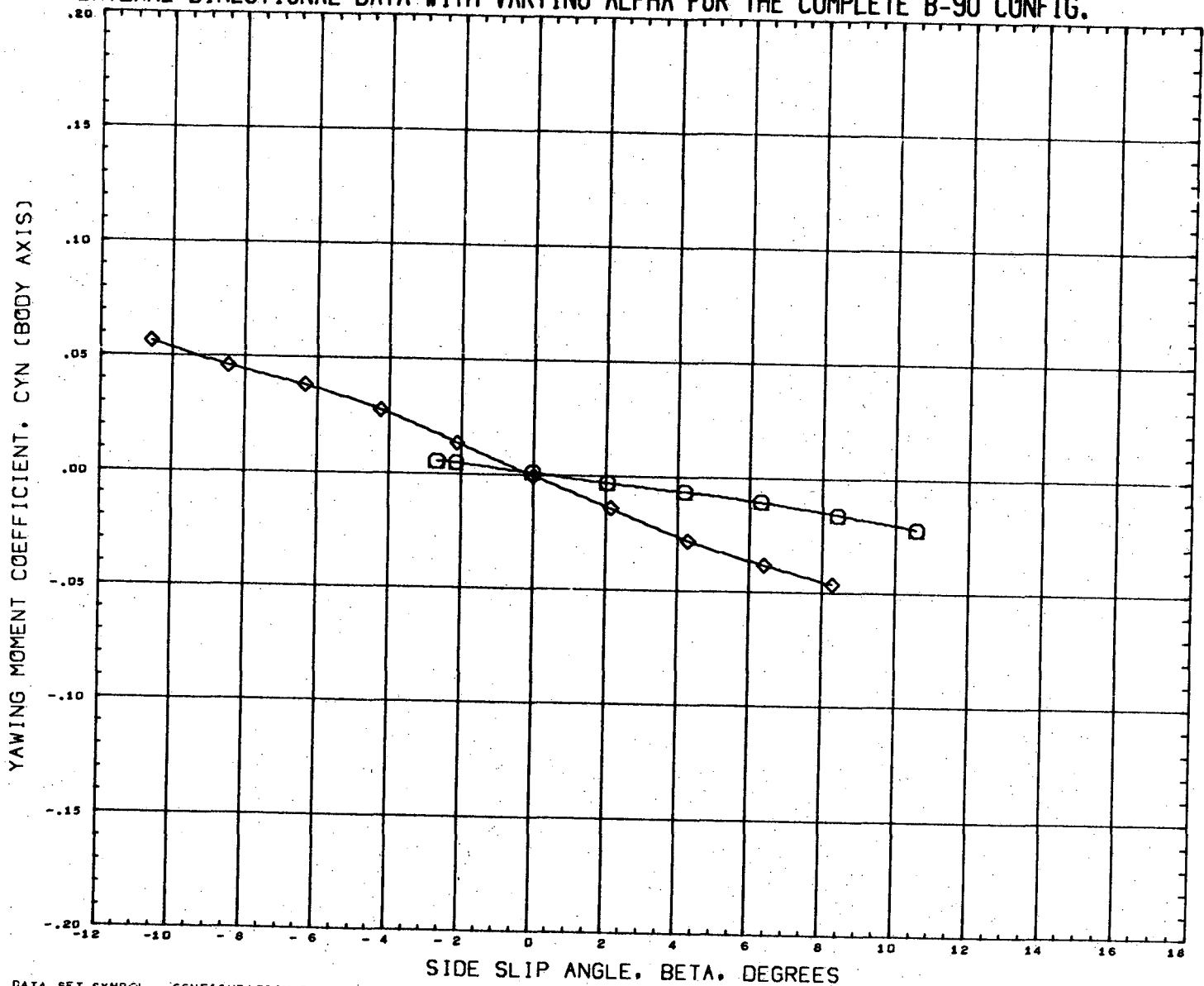
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-9U CONFIG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=D R=D	0.000	0.000	0.000	0.000	SREF 14.9040 sq.in.
(A35TCD)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=6 C=D R=D	6.000	0.000	0.000	0.000	LREF 3.0120 in.
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D R=D	15.000	0.000	0.000	0.000	BREF 6.0180 in.
						XMRP 7.2990 in.
						YMRP 0.0000 in.
						ZMRP 0.0000 in.
						SCALE 0.0035

MACH 1.464

LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-9U CONFIG.

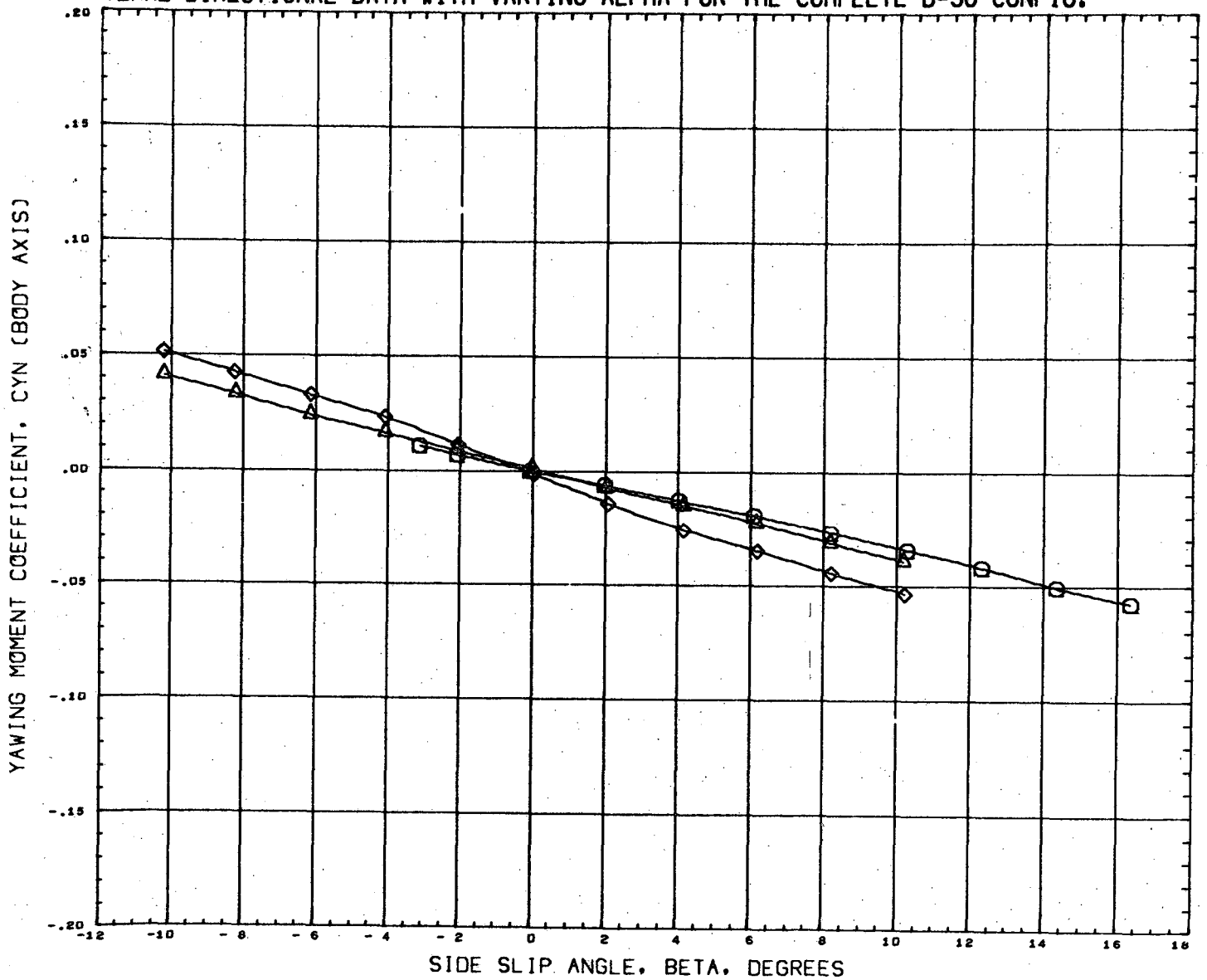


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=D R=D	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A35TCD)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.000	0.000	0.000	0.000	LREF	3.0120 IN.
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D R=D	15.000	0.000	0.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.950

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LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-9U CONFIG.

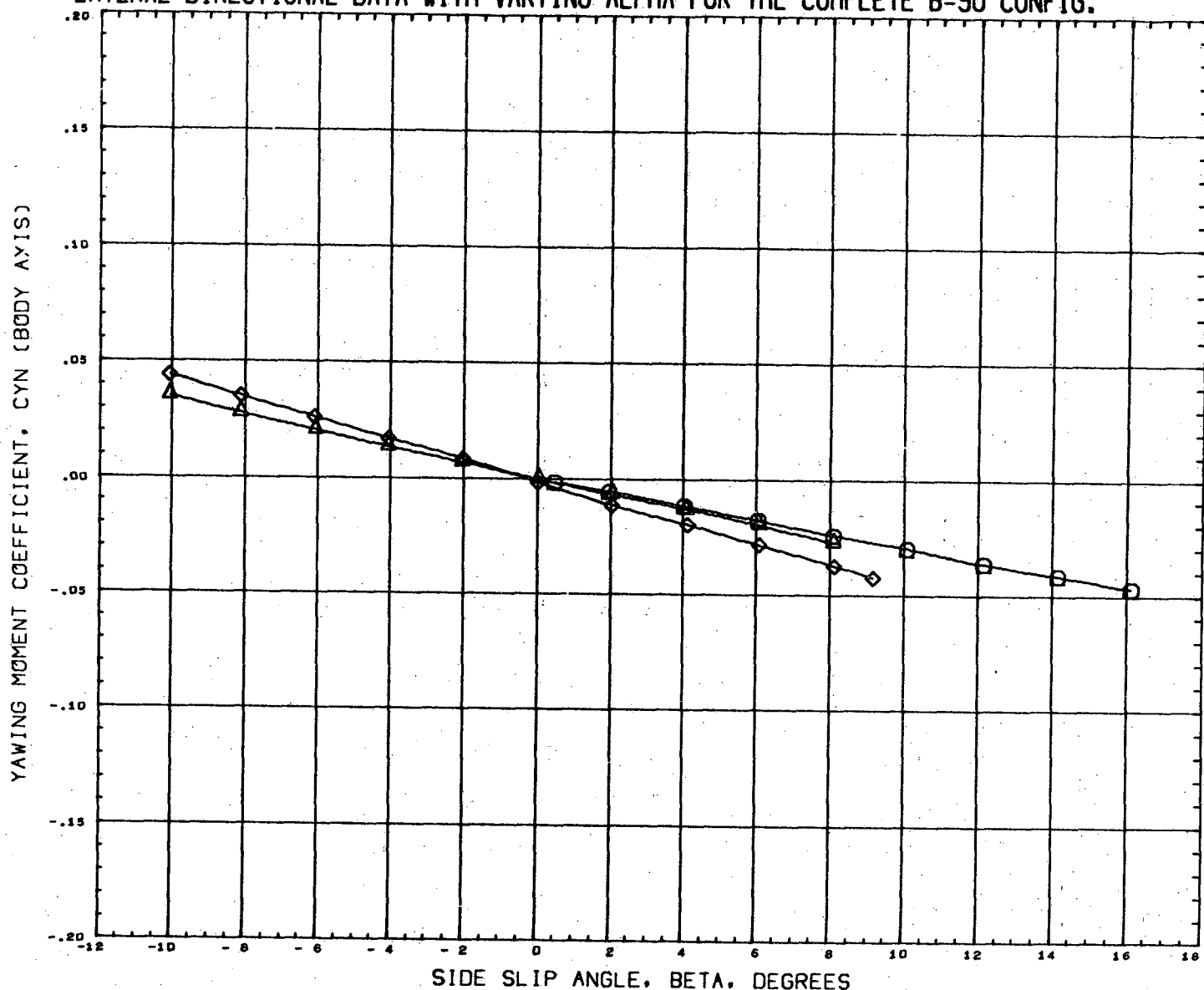


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=D R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A35TCD)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=6 C=D R=0	6.000	0.000	0.000	0.000	LREF	3.0120 IN.
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D R=0	15.000	0.000	0.000	0.000	BREF	6.0180 IN.
						XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 2.990

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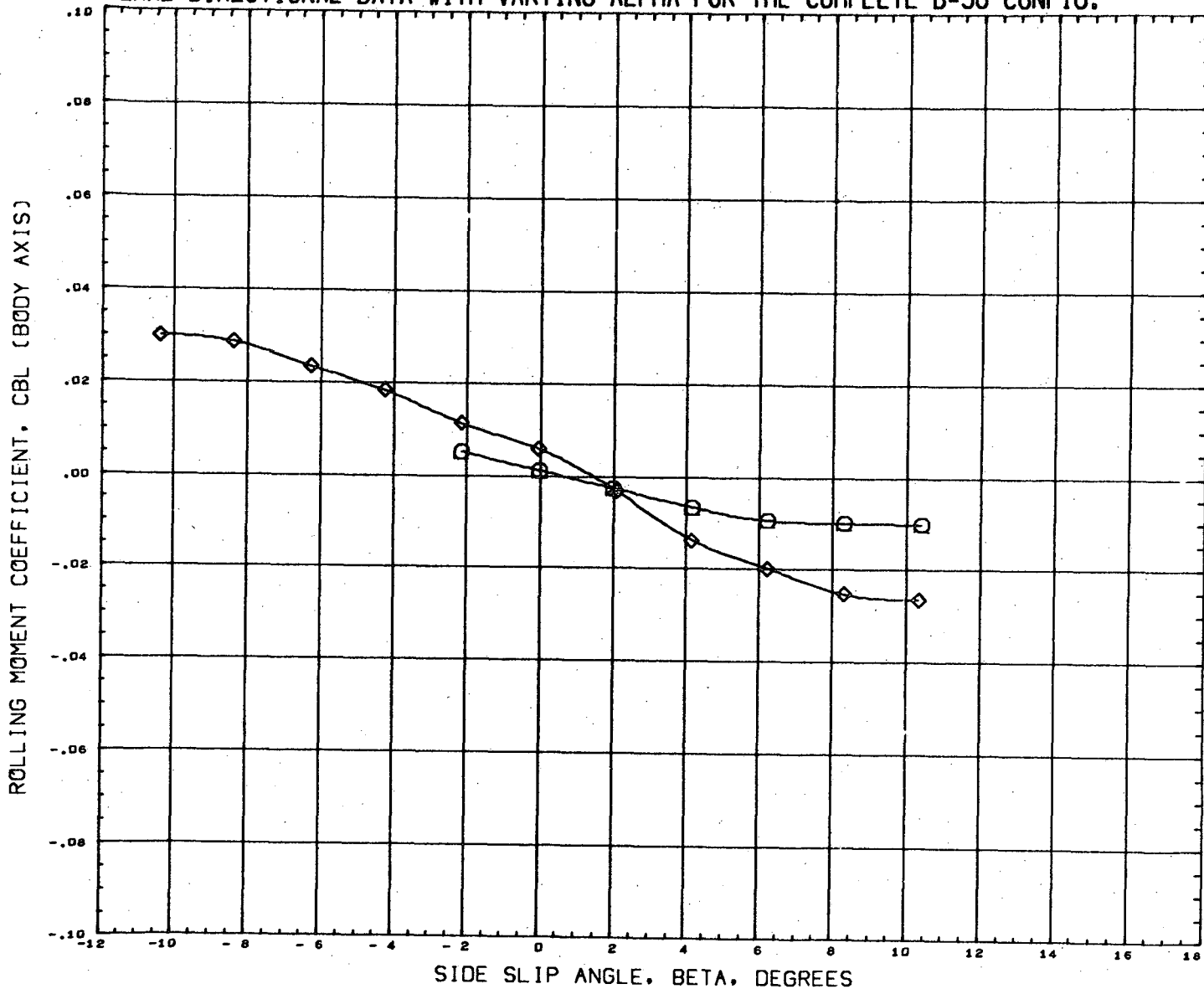
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-90 CONFIG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=D R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A35TCD)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=6 C=D R=0	6.000	0.000	0.000	0.000	LREF	3.0120 IN.
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D R=0	15.000	0.000	0.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 4.959

LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-9U CONFIG.



DATA SET SYMBOL CONFIGURATION DESCRIPTION

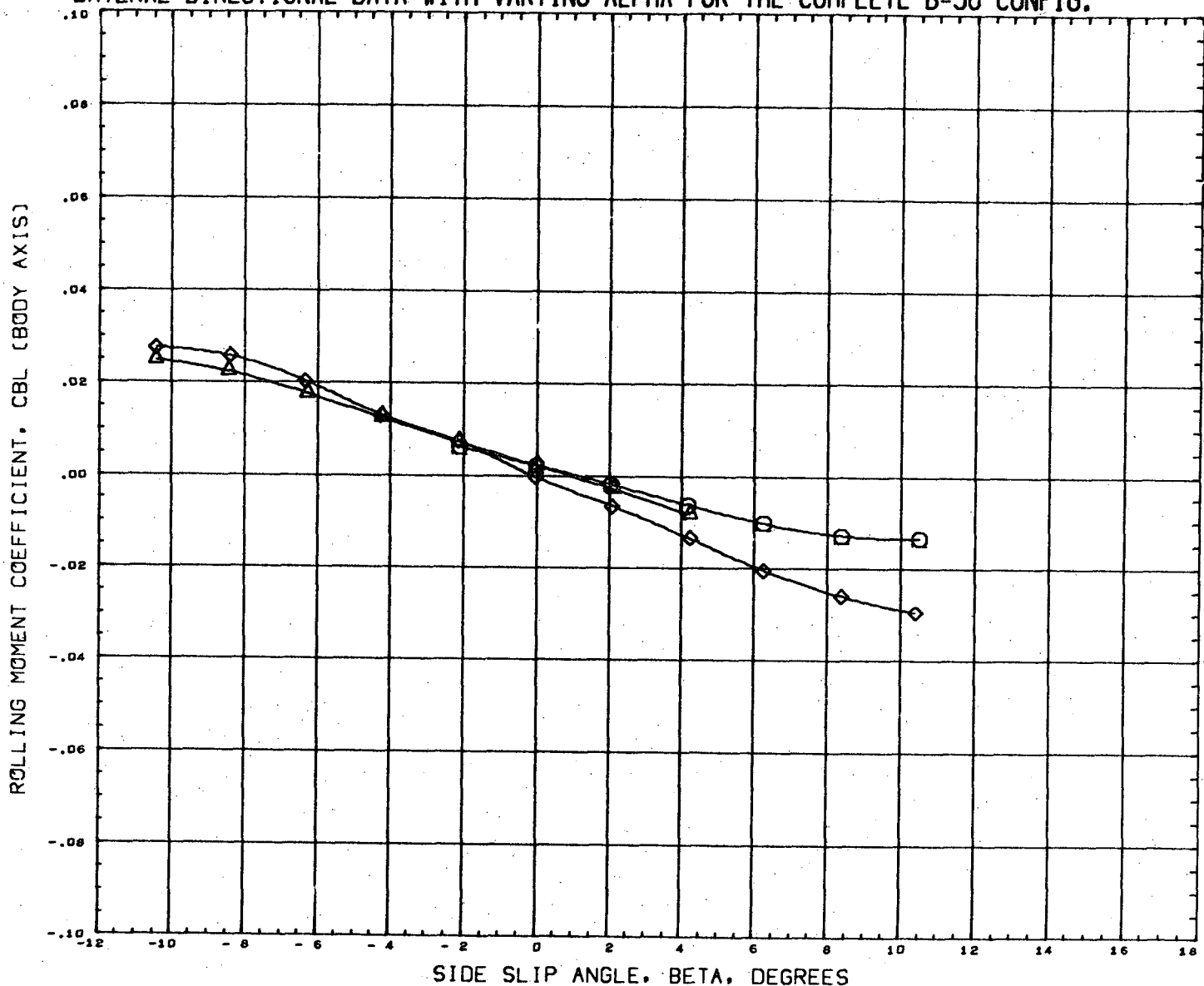
(B35TCA) MSFC TWT-493 GD/C B25W19C8V1D ALPHA=0 C=D R=D
 (A35TCD) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (A35TCC) MSFC TWT-493 GD/C B25W19C8V1D ALPHA=15 C=D R=D

ALPHA ELEVON CANARD RUDDER
 0.000 0.000 0.000 0.000
 6.000 0.000 0.000 0.000
 15.000 0.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 0.996

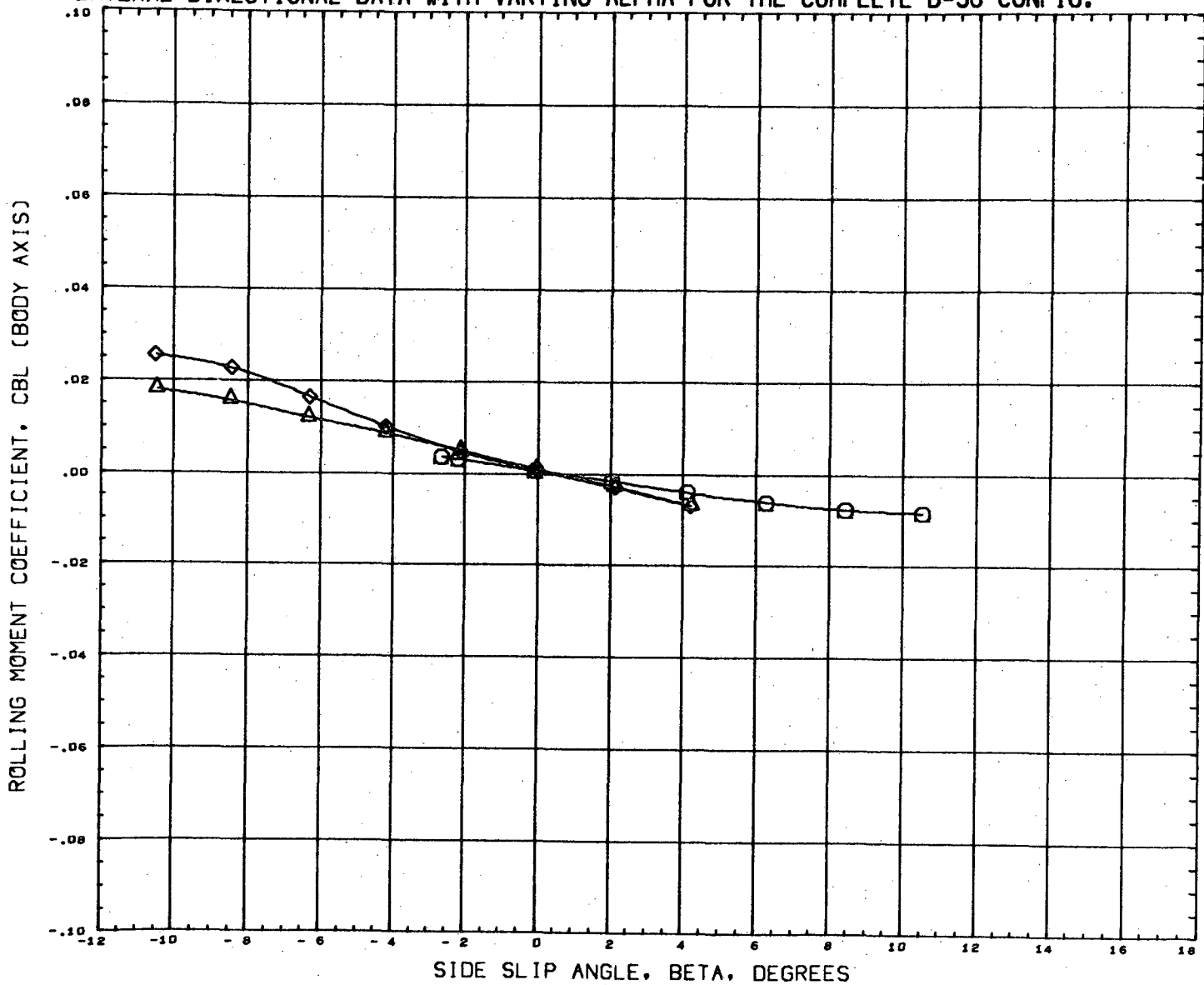
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-90 CONFIG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V1D ALPHA=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A35TCD)	MSFC TWT-493 GD/C B25W19C8V1D ALPHA=6 C=0 R=0	6.000	0.000	0.000	0.000	LREF 3.0120 IN.
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V1D ALPHA=15 C=0 R=0	15.000	0.000	0.000	0.000	BREF 6.0160 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.197

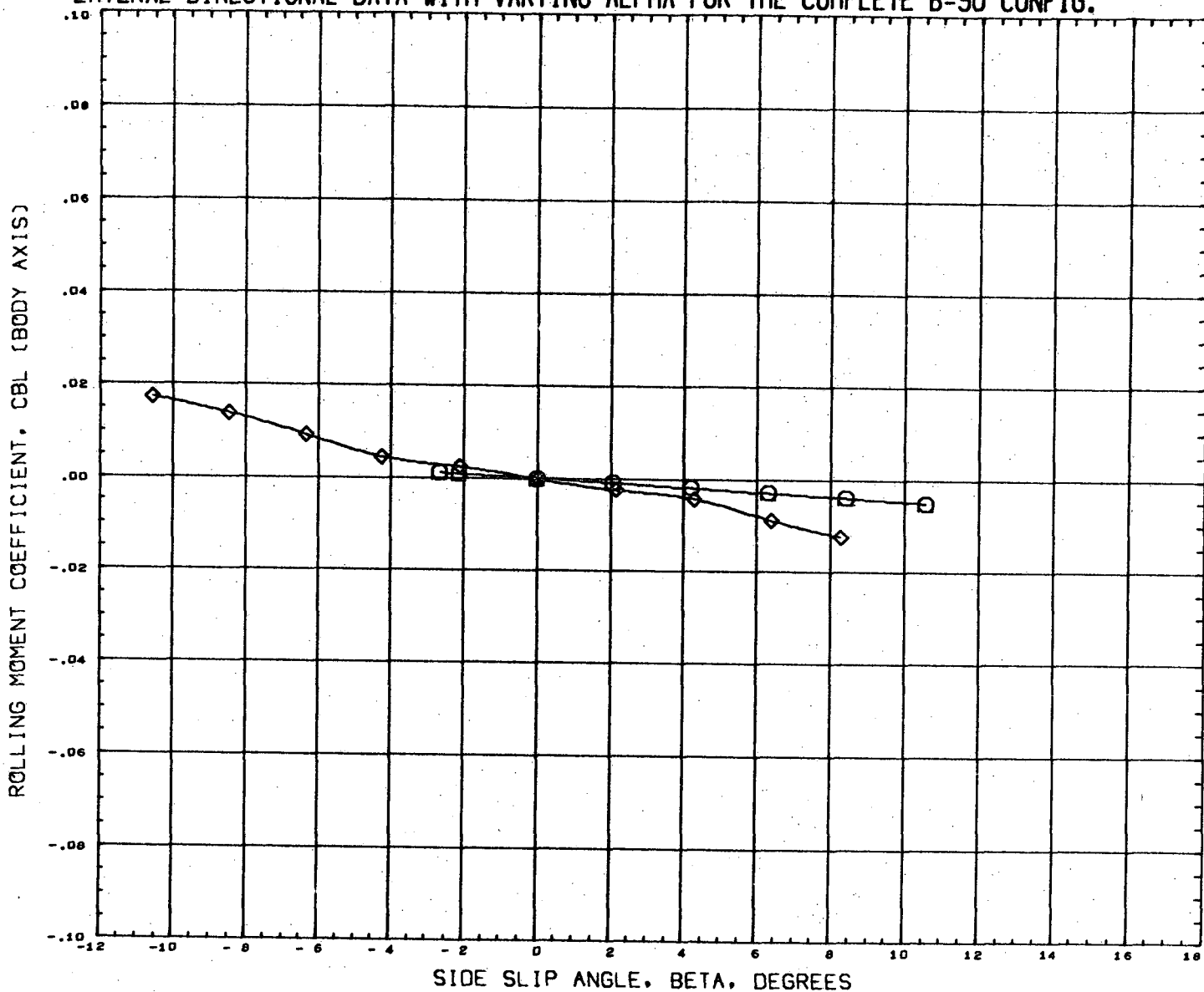
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-9U CONFIG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A35TCD)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=6 C=0 R=0	6.000	0.000	0.000	0.000	LREF 3.0120 IN.
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=0 R=0	15.000	0.000	0.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.464

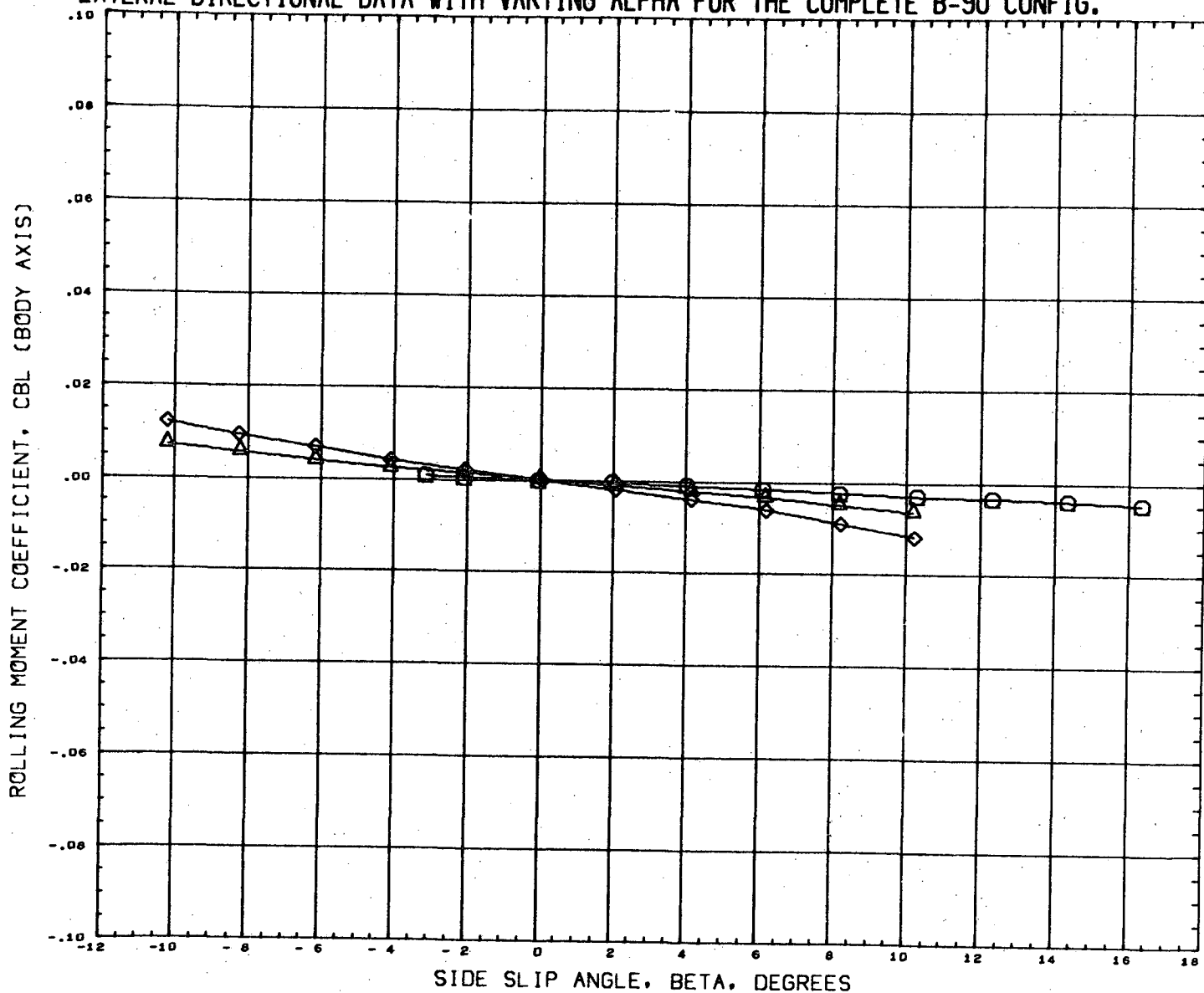
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-9U CONFIG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V1D ALPHA=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A35TCD)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.000	0.000	0.000	0.000	LREF	3.0120 IN.
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V1D ALPHA=15 C=0 R=0	15.000	0.000	0.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.950

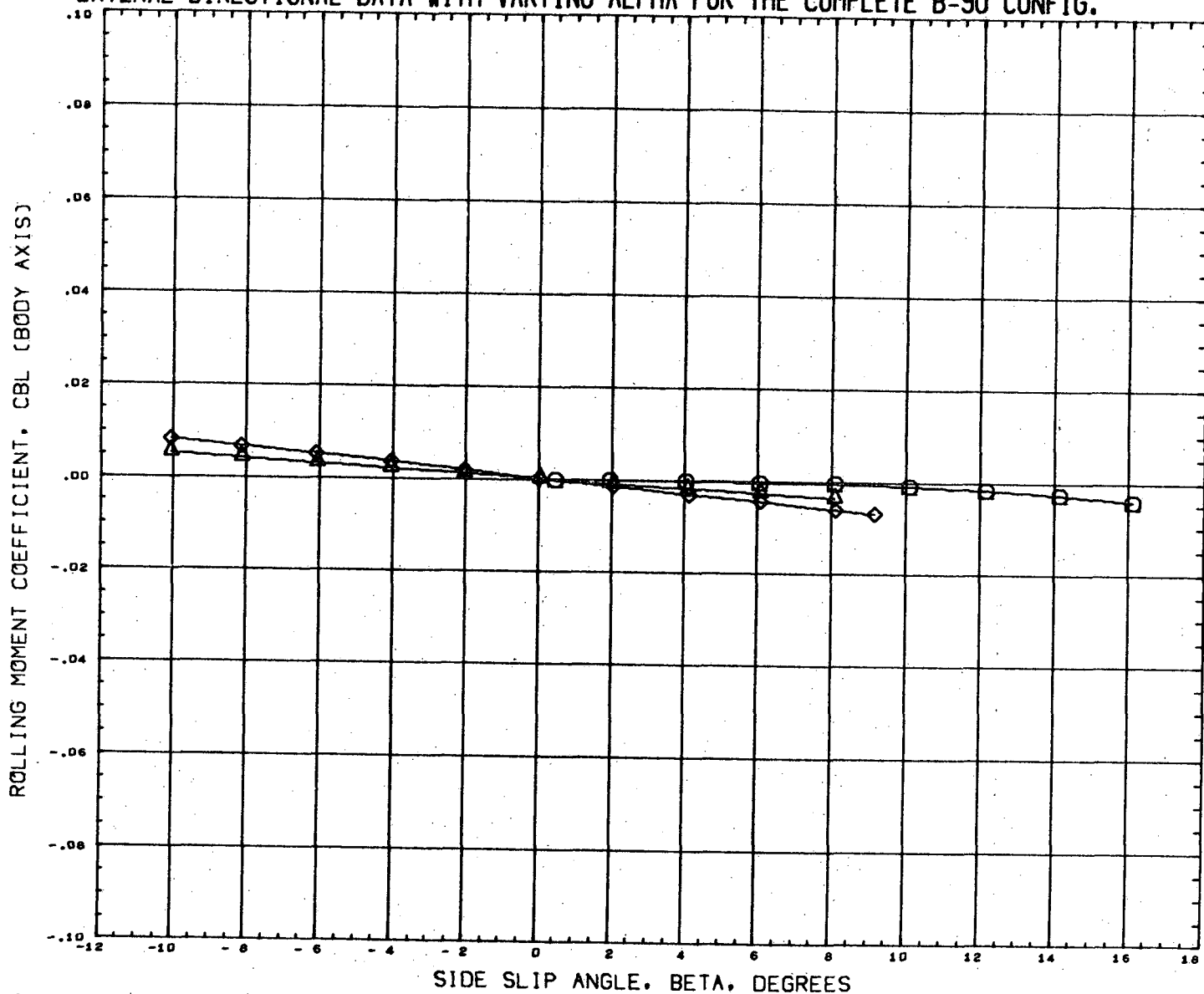
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-9U CONFIG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A35TCD)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=6 C=0 R=0	6.000	0.000	0.000	0.000	LREF	3.0120 IN.
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=0 R=0	15.000	0.000	0.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 2.990

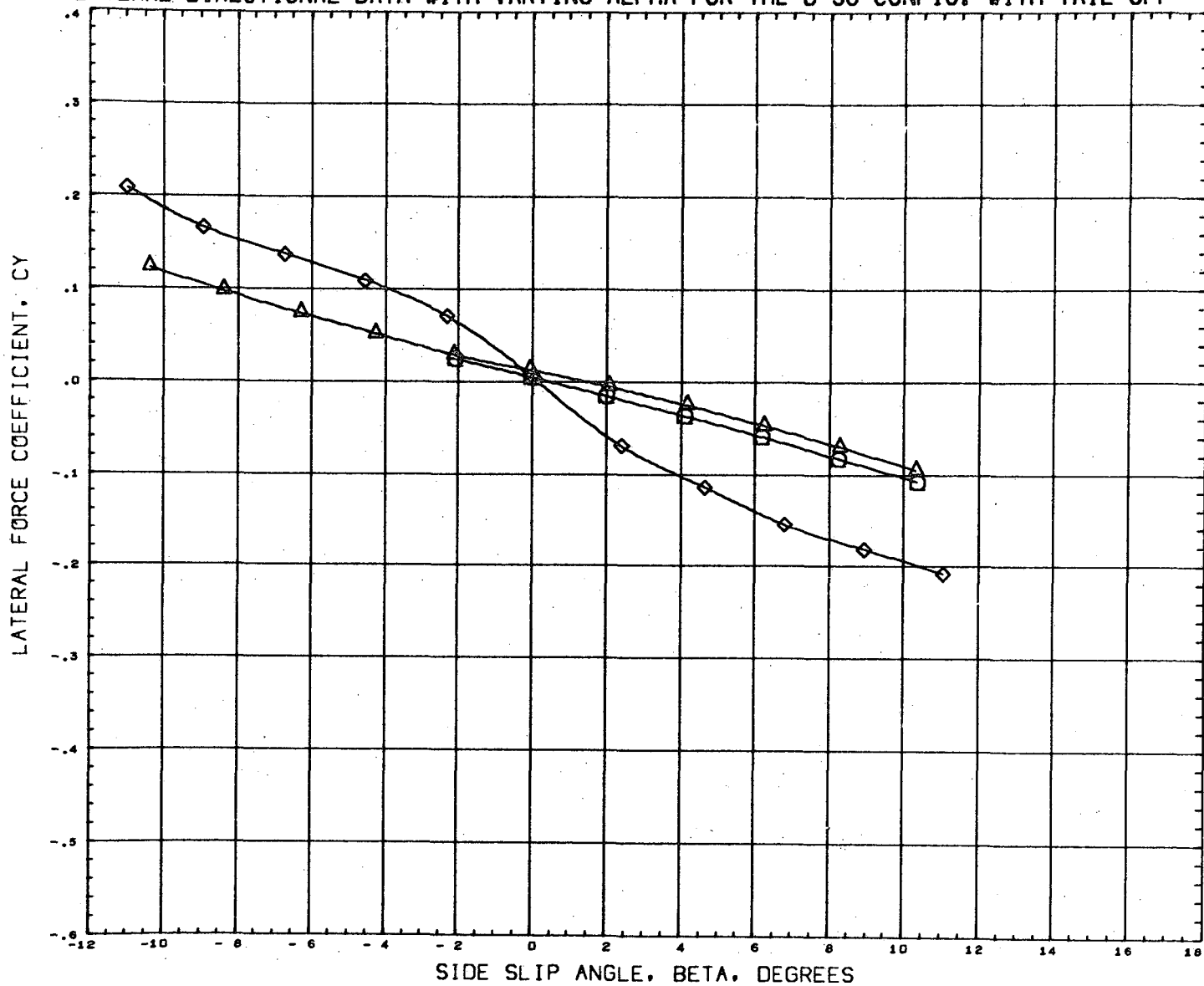
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE COMPLETE B-9U CONFIG.



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION		
(B35TDA)	○	MSFC TWT-493 GD/C B25W19C8V1D ALPHA=0 C=D R=D	0.000	0.000	0.000	0.000	SREF	14.9040	SQ. IN.
(A35TCD)	◇	MSFC TWT-493 GD/C B25W19C8V1D ALPHA=6 C=D R=D	6.000	0.000	0.000	0.000	LREF	3.0120	IN.
(A35TCC)	△	MSFC TWT-493 GD/C B25W19C8V1D ALPHA=15 C=D R=D	15.000	0.000	0.000	0.000	BREF	6.0160	IN.
							XMRP	7.2990	IN.
							YMRP	0.0000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0035	

MACH 4.959

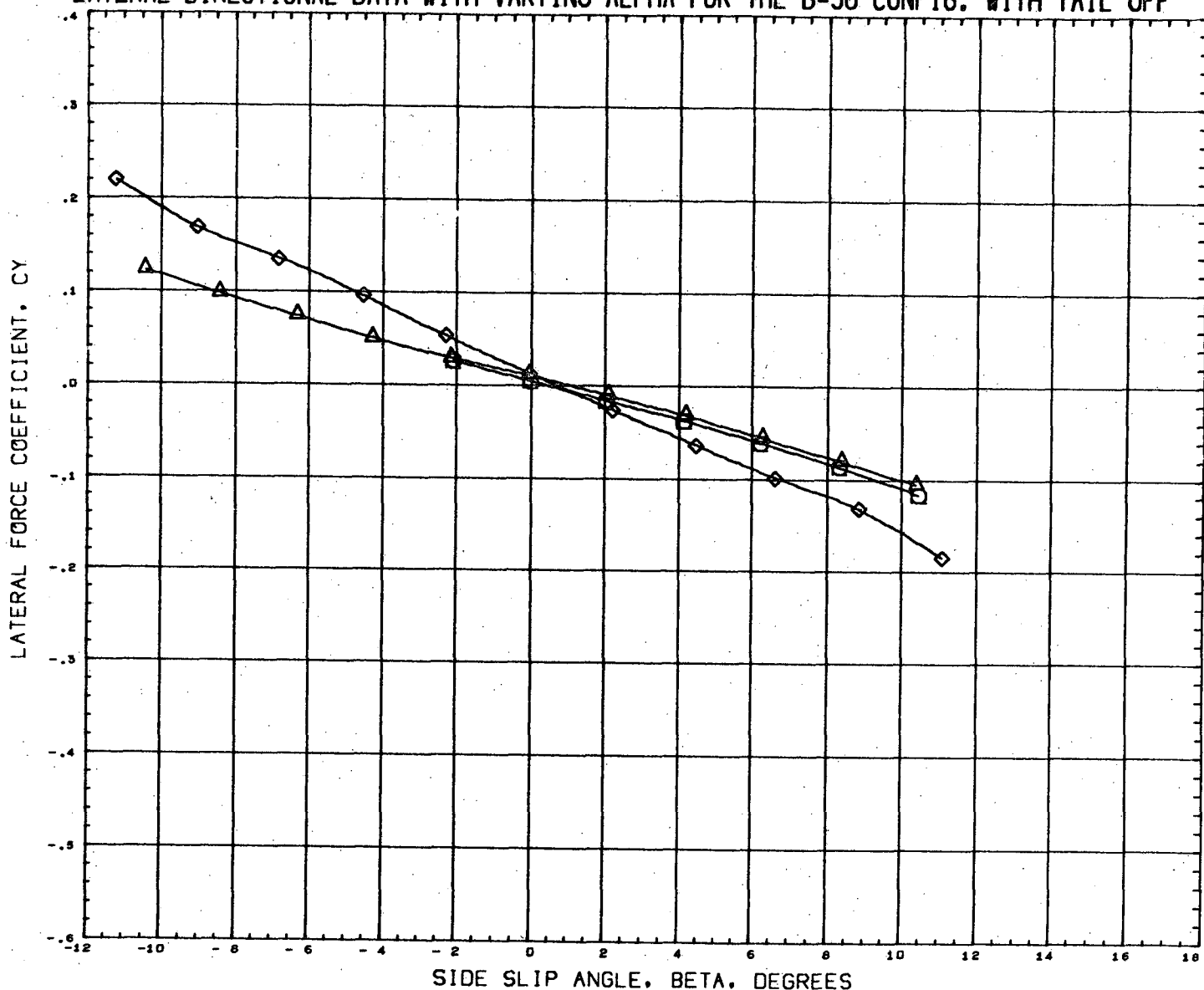
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(A350DA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=0 C=DR=DF	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A350CC)	MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF	15.000	0.000	0.000	0.000	LREF 3.0120 IN.
(B350CB)	MSFC TWT-493 GD/C B25W19C8 ALPHA=25 C=D R=0	25.000	0.000	0.000	0.000	BREF 6.0180 IN.
(B350CA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.004

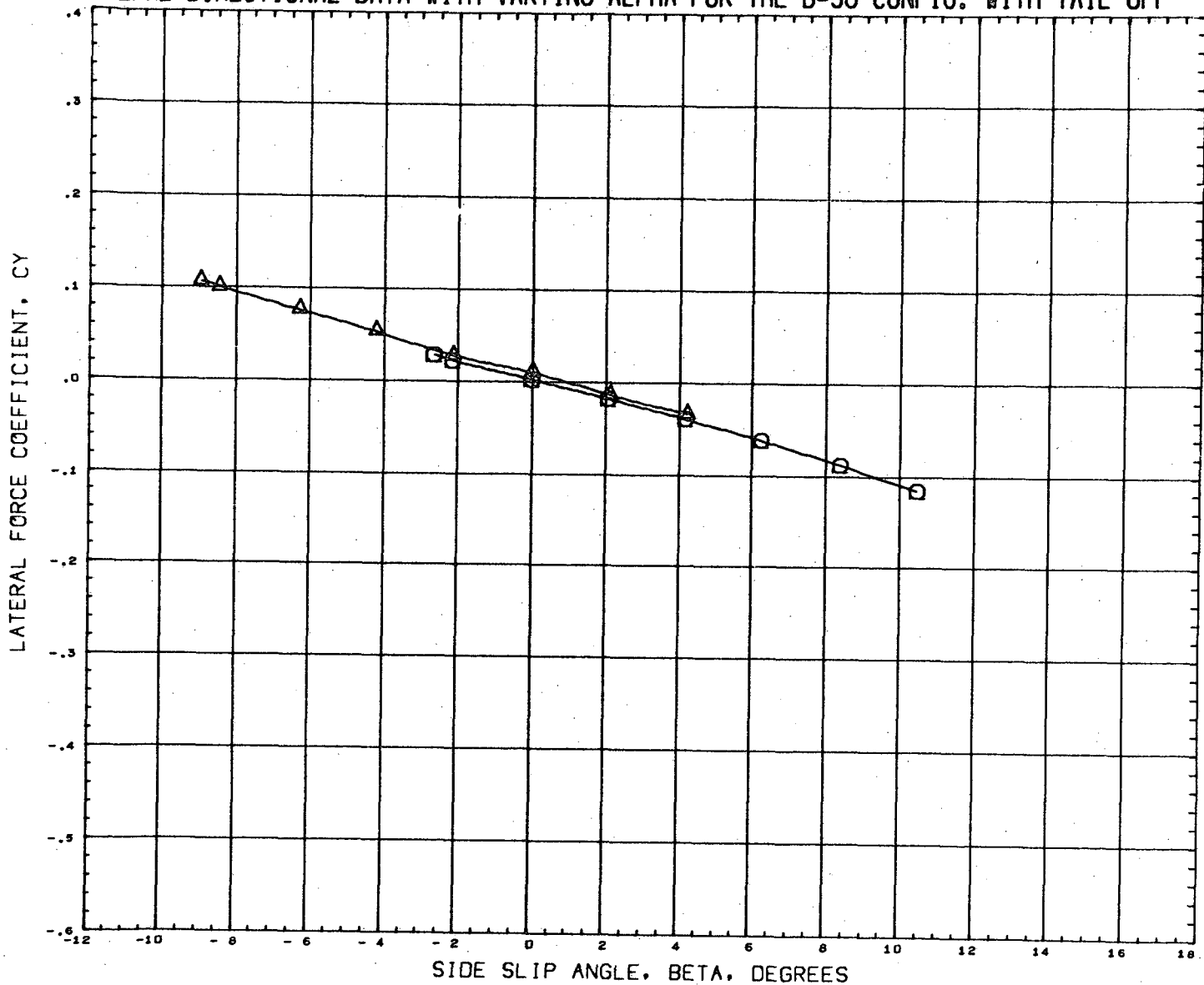
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(A350DA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=0 C=DR=DF	0.000	0.000	0.000	0.000	SREF 14.9040 99. IN.
(A350CC)	MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF	15.000	0.000	0.000	0.000	LREF 3.0120 IN.
(B350CB)	MSFC TWT-493 GD/C B25W19C8 ALPHA=25 C=D R=0	25.000	0.000	0.000	0.000	BREF 6.0180 IN.
(B350CA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.196

LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350DA) MSFC TWT-493 GD/C B25W19C8 ALPHA=0 C=DR=DF
 (A350CC) MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF
 (B350CB) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (B350CA) DATA NOT AVAILABLE FOR ALL CONDITIONS

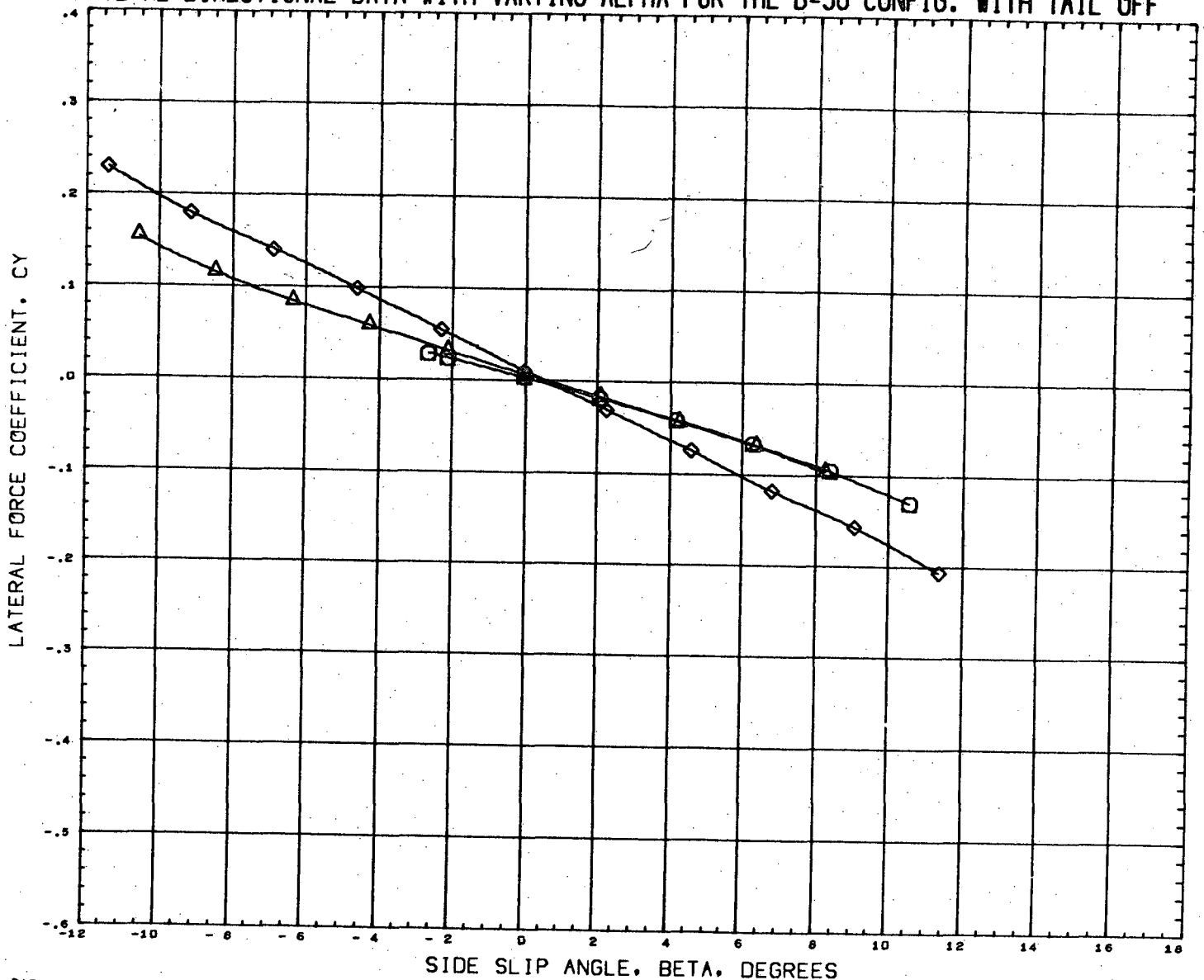
ALPHA	ELEVON	CANARD	RUDDER
0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000
25.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000

REFERENCE INFORMATION

SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
YMRP	7.2990	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MACH 1.466

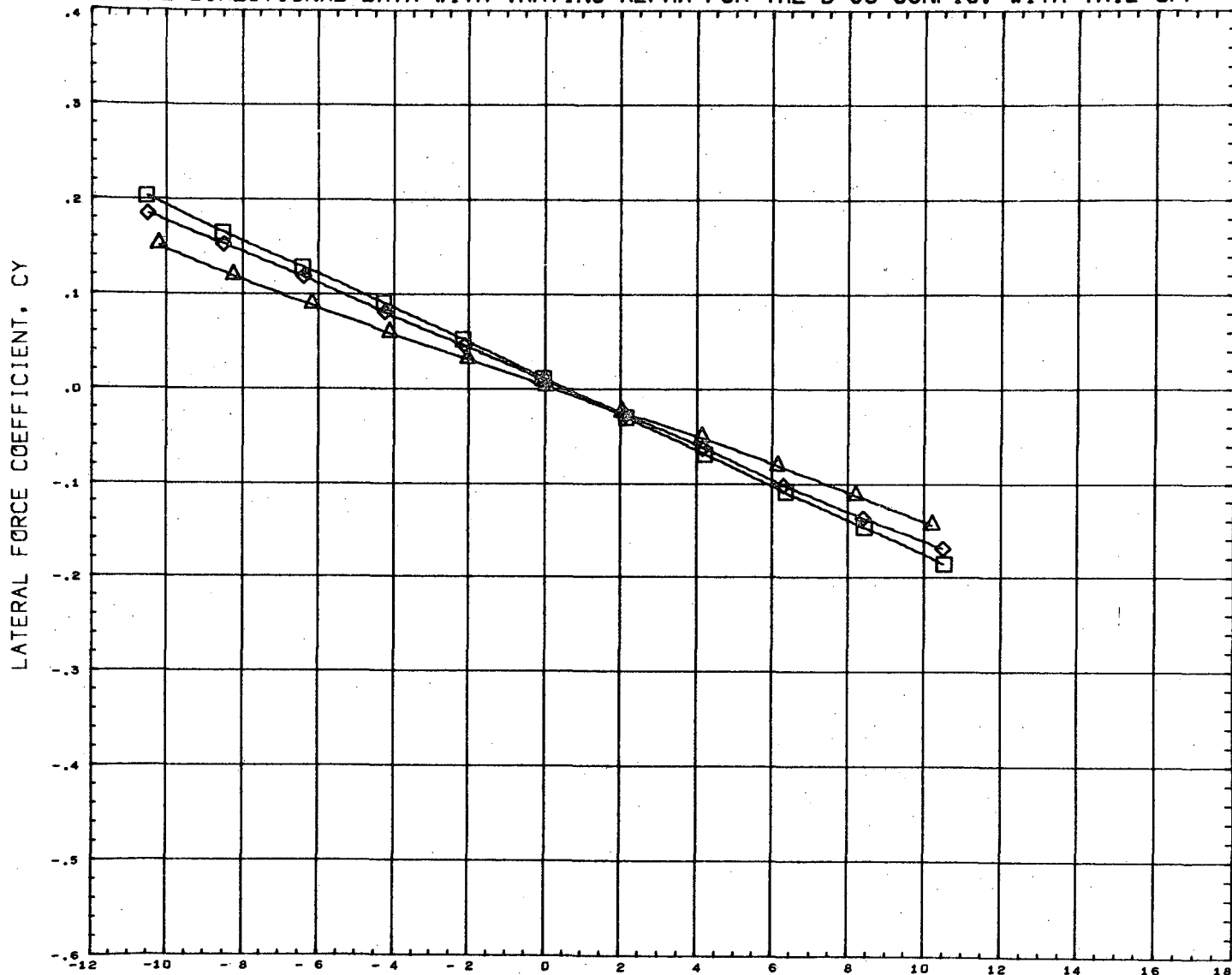
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(A350DA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=0 C=DR=DF	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A350CC)	MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF	15.000	0.000	0.000	0.000	LREF 3.0120 IN.
(B350CB)	MSFC TWT-493 GD/C B25W19C8 ALPHA=25 C=D R=0	25.000	0.000	0.000	0.000	BREF 6.0160 IN.
(B350CA)	DATA NOT AVAILABLE FOR ALL CONDITIONS.	30.000	0.000	0.000	0.000	XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 1.950

LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF

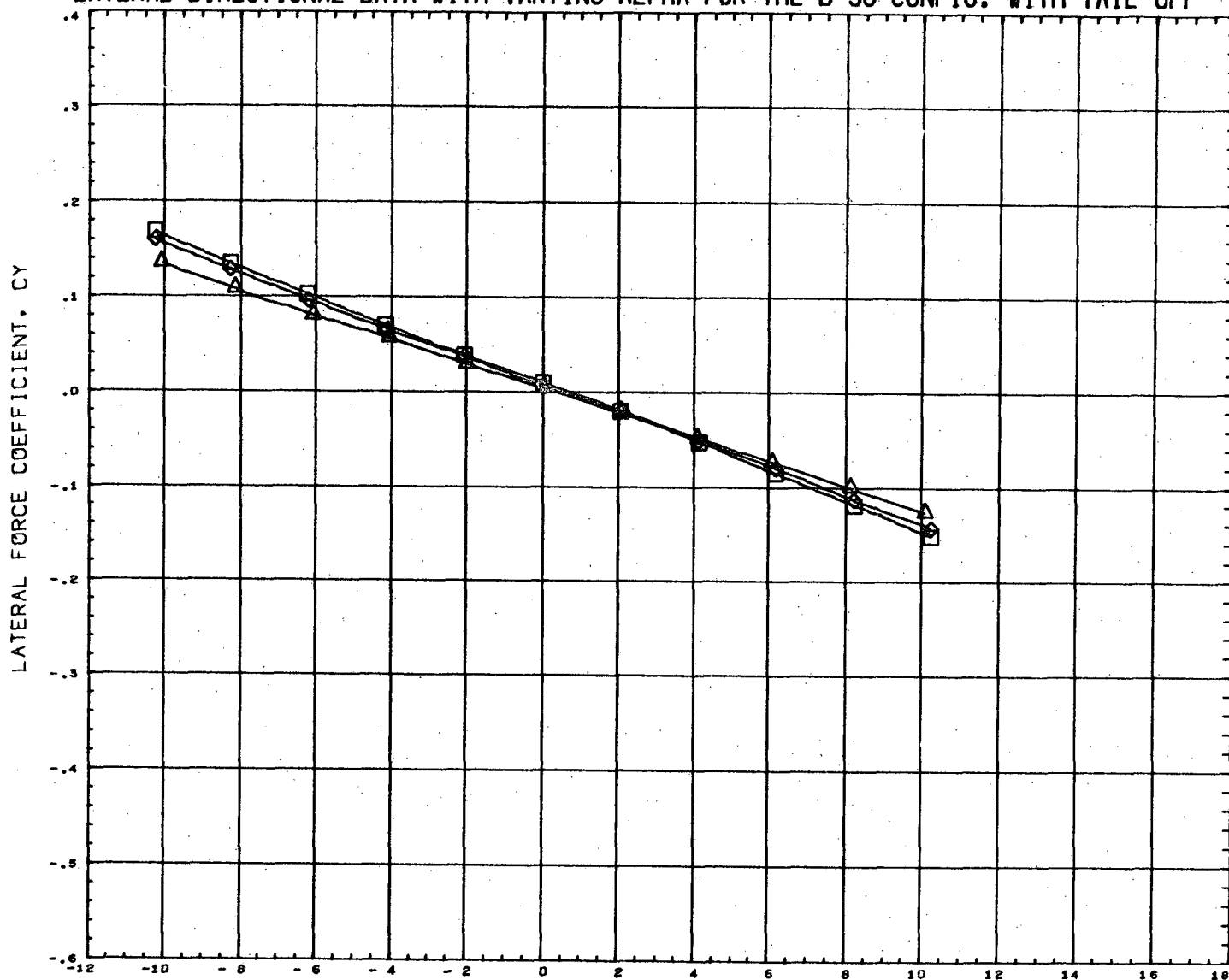


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(A350DA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A350CC)	MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=0R=0F	15.000	0.000	0.000	0.000	LREF 3.0120 IN.
(B350CB)	MSFC TWT-493 GD/C B25W19C8 ALPHA=25 C=0 R=0	25.000	0.000	0.000	0.000	BREF 6.0180 IN.
(B350CA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=0 R=0	30.000	0.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 2.990

ORIGINAL PAGE IS
OF POOR QUALITY

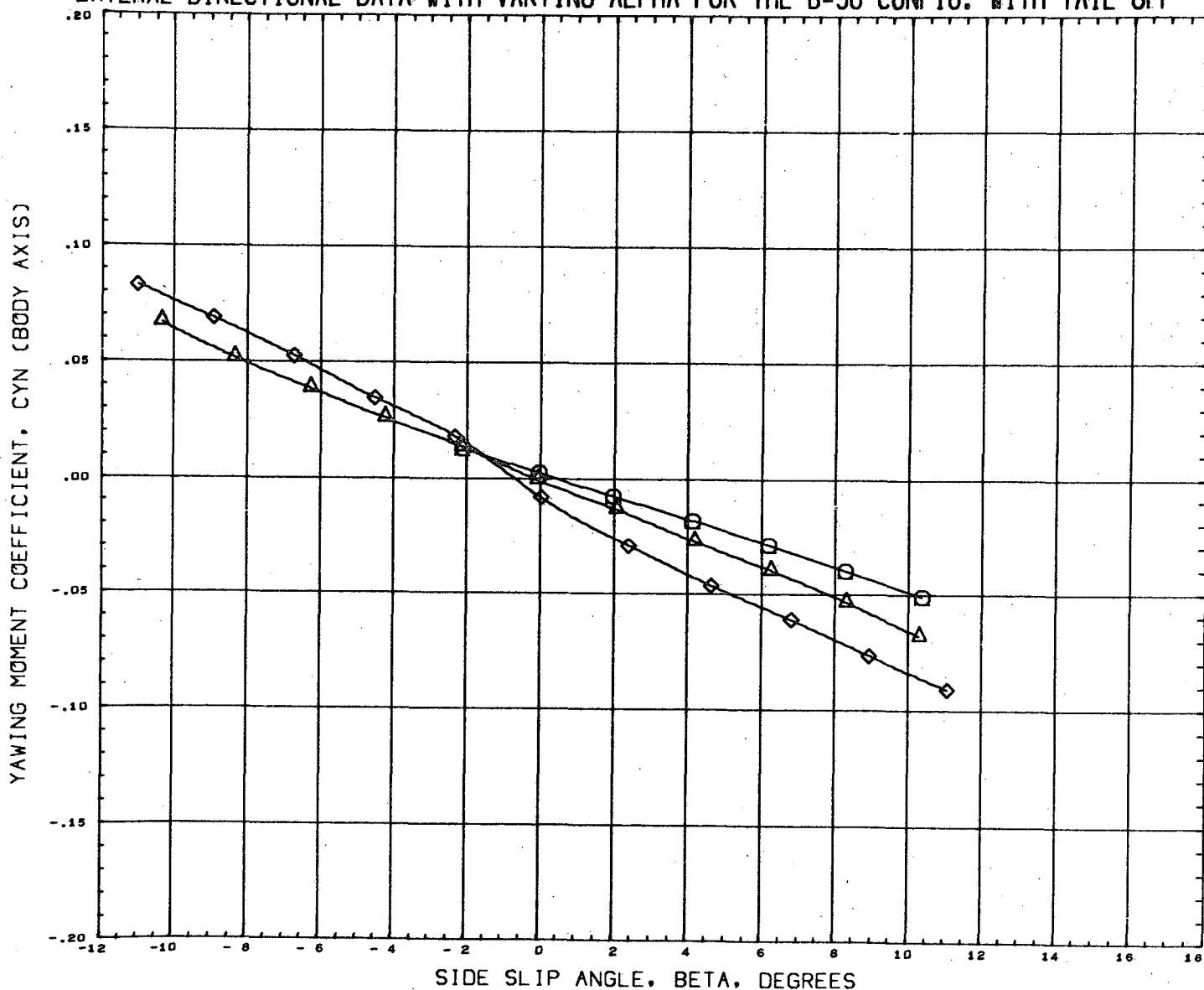
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(A350DA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A350CC)	MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF	15.000	0.000	0.000	0.000	LREF	3.0120 IN.
(B350CB)	MSFC TWT-493 GD/C B25W19C8 ALPHA=25 C=D R=0	25.000	0.000	0.000	0.000	BREF	6.0180 IN.
(B350CA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=D R=0	30.000	0.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 4.959

LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF

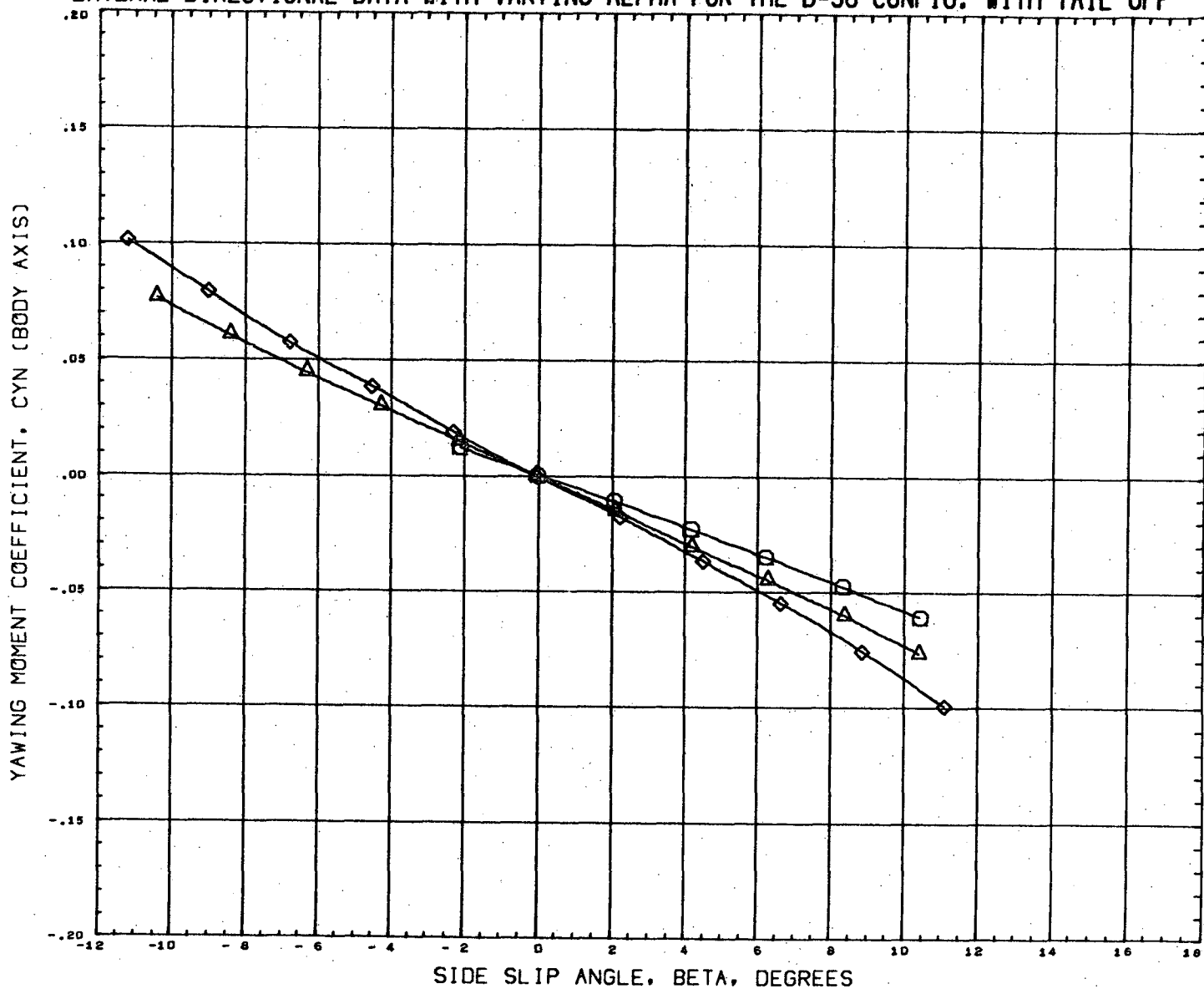


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(A350DA)	MSFC TWT-493 GD/C B25W19C8	ALPHA=0	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15	0.000	0.000	0.000	LREF	3.0120 IN.
(B350CB)	MSFC TWT-493 GD/C B25W19C8	ALPHA=25	0.000	0.000	0.000	BREF	6.0180 IN.
(B350CA)	MSFC TWT-493 GD/C B25W19C8	ALPHA=30	0.000	0.000	0.000	XMRP	7.2990 IN.
	DATA NOT AVAILABLE FOR ALL CONDITIONS					YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.004

ORIGINAL PAGE IS
OF POOR QUALITY

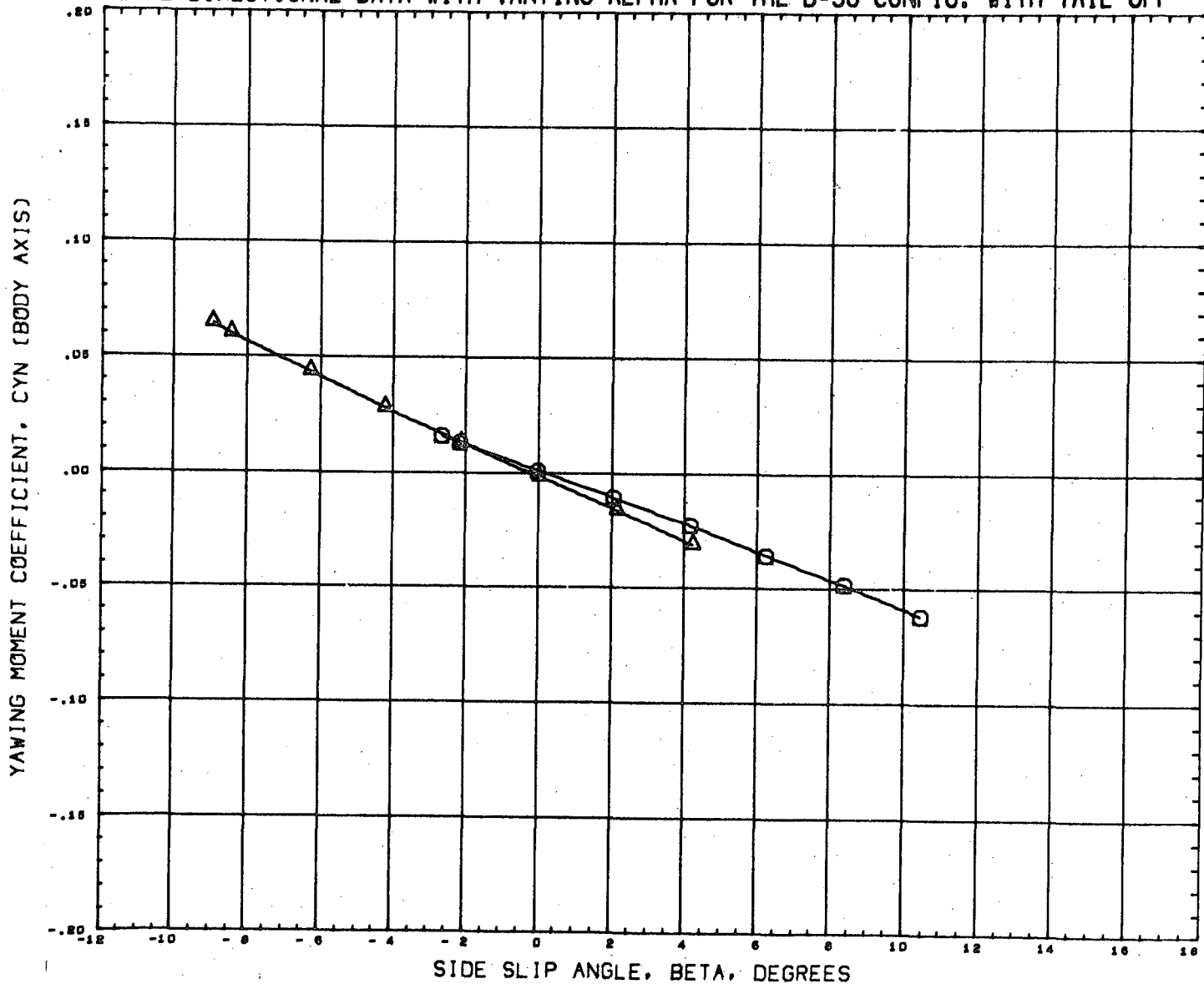
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(A350DA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=0 C=DR=DF	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A350CC)	MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF	15.000	0.000	0.000	0.000	LREF	3.0120 IN.
(B350CB)	MSFC TWT-493 GD/C B25W19C8 ALPHA=25 C=D R=0	25.000	0.000	0.000	0.000	BREF	6.0180 IN.
(B350CA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.196

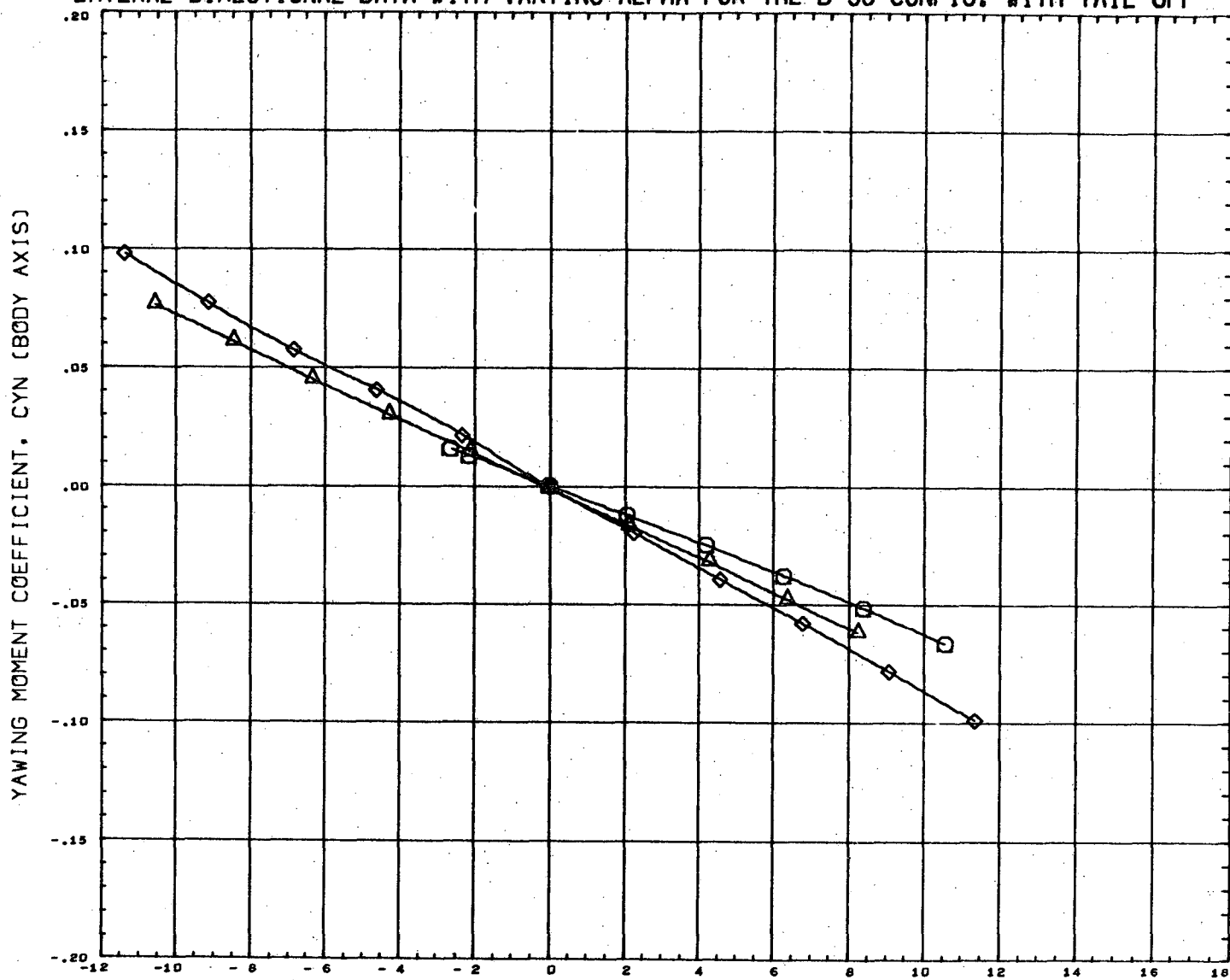
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(A350DA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=0 C=DR=DF	0.000	0.000	0.000	0.000	SREF 14.9040 sq. in.
(A350CC)	MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF	15.000	0.000	0.000	0.000	LREF 3.0120 in.
(B350CB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	25.000	0.000	0.000	0.000	BREF 6.0180 in.
(B350CA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	XMRF 7.2990 in.
						YMRF 0.0000 in.
						ZMRF 0.0000 in.
						SCALE 0.0035

MACH 1.466

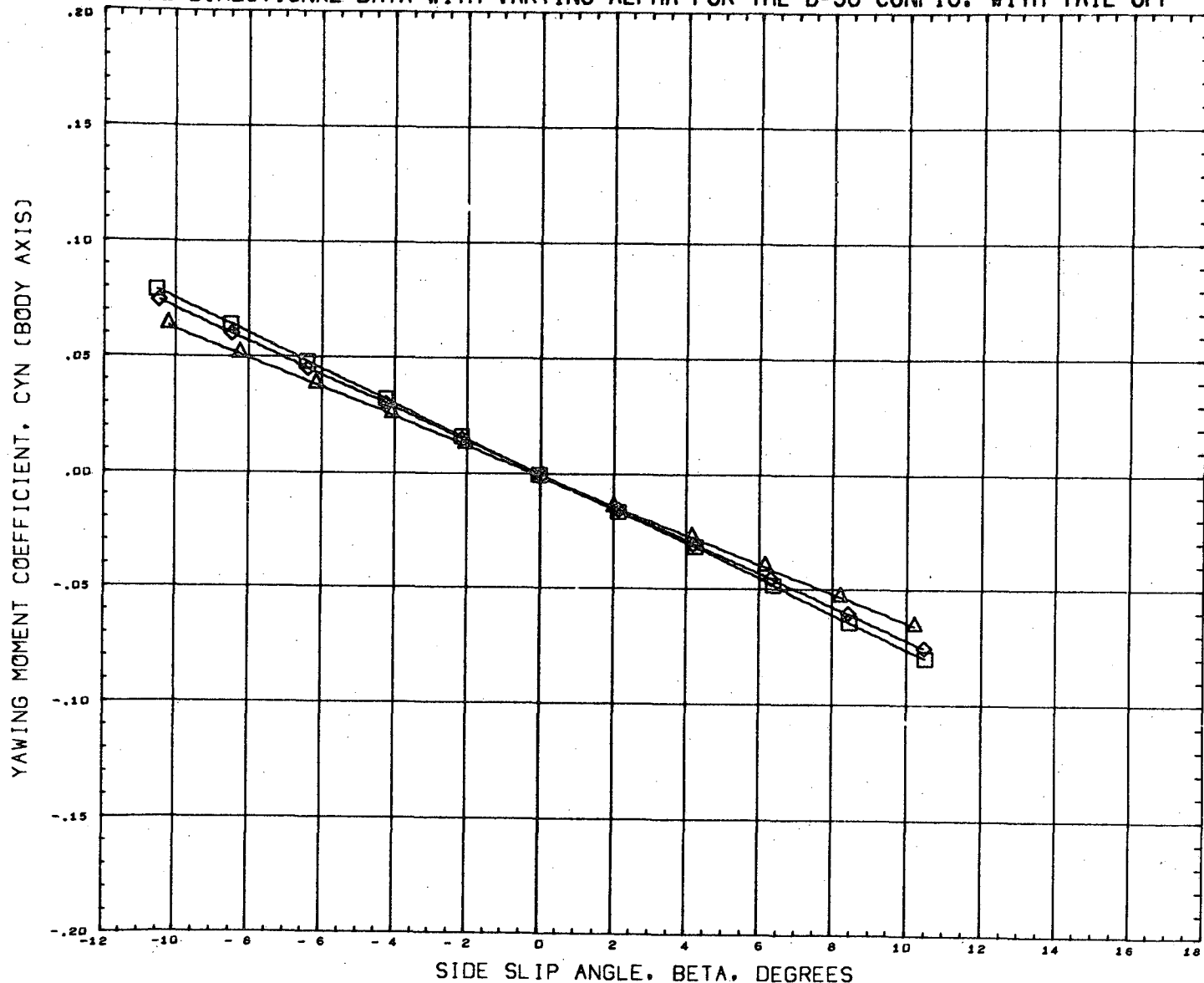
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(A350DA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=0 C=DR=DF	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A350CC)	MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF	15.000	0.000	0.000	0.000	LREF 3.0120 IN.
(B350CB)	MSFC TWT-493 GD/C B25W19C8 ALPHA=25 C=0 R=0	25.000	0.000	0.000	0.000	BREF 6.0180 IN.
(B350CA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=0 R=0	30.000	0.000	0.000	0.000	XMRP 7.2990 IN.
	DATA NOT AVAILABLE FOR ALL CONDITIONS					YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.950

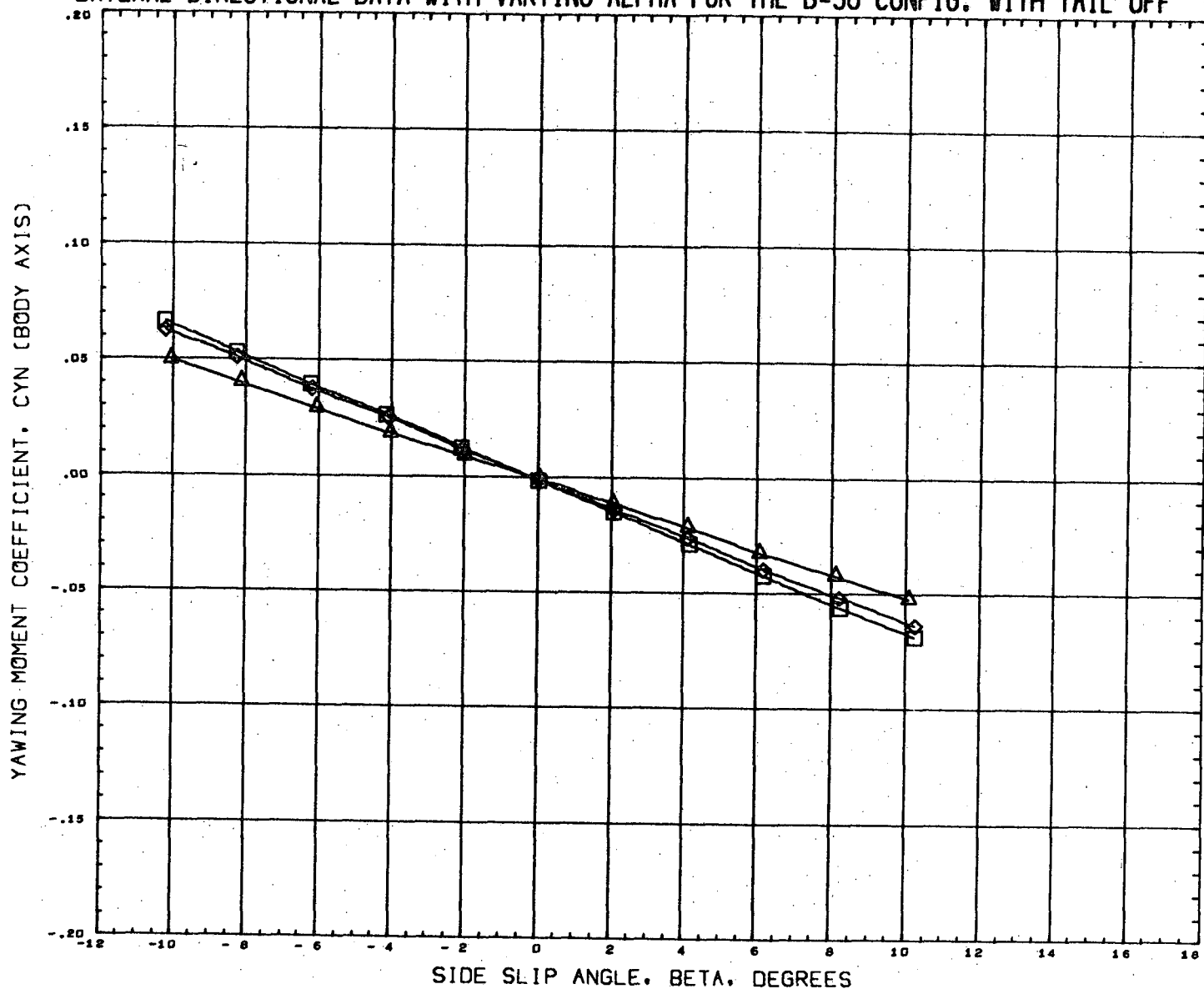
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(A350DA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A350CC)	MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF	15.000	0.000	0.000	0.000	LREF 3.0120 IN.
(B350CB)	MSFC TWT-493 GD/C B25W19C8 ALPHA=25 C=D R=D	25.000	0.000	0.000	0.000	BREF 6.0180 IN.
(B350CA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=D R=D	30.000	0.000	0.000	0.000	XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 2.990

LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



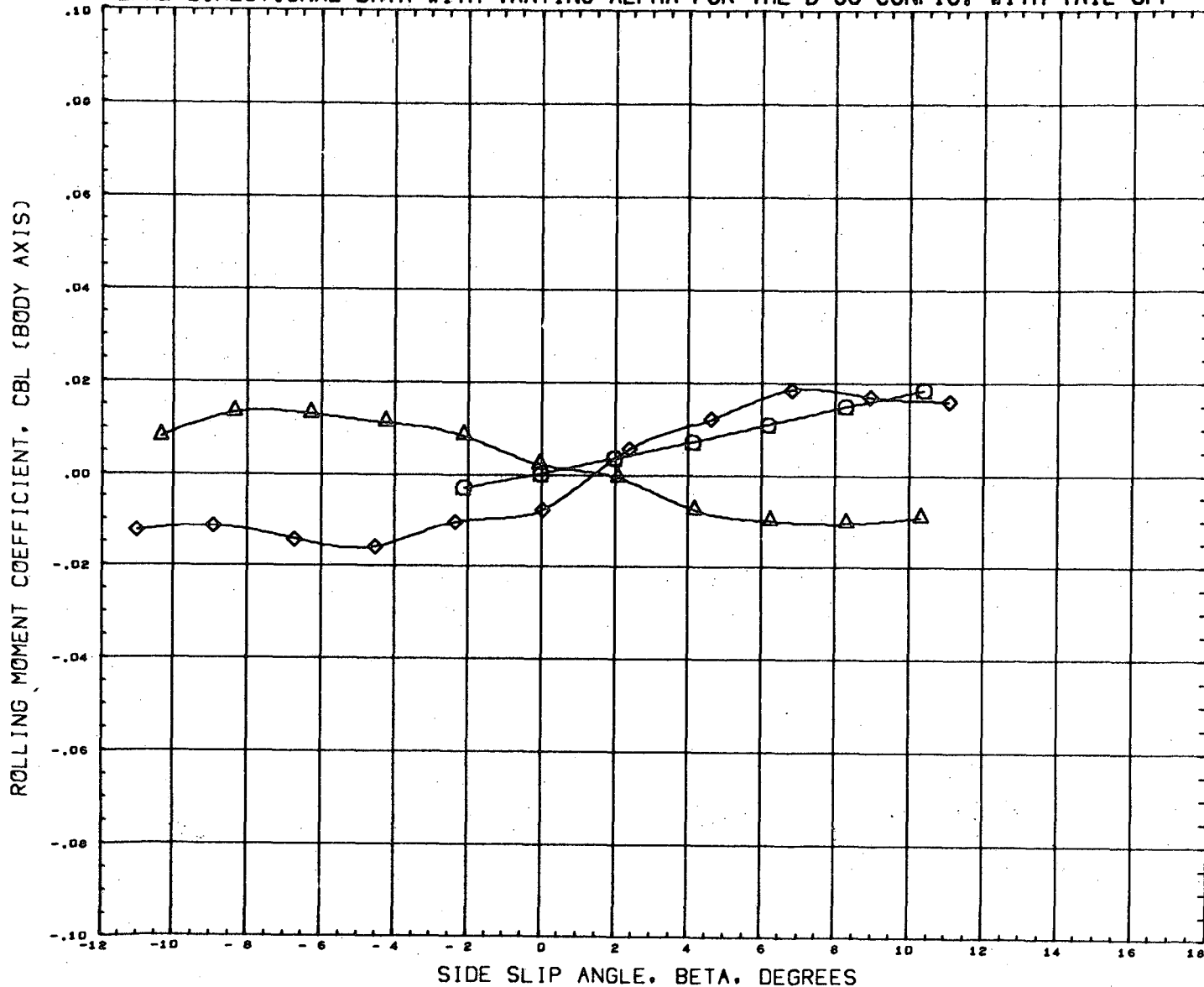
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350DA) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (A350CC) MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF
 (B350CB) MSFC TWT-493 GD/C B25W19C8 ALPHA=25 C=D R=0
 (B350CA) MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=D R=0

ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
15.000	0.000	0.000	0.000	LREF 3.0120 IN.
25.000	0.000	0.000	0.000	BREF 6.0180 IN.
30.000	0.000	0.000	0.000	XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

MACH 4.959

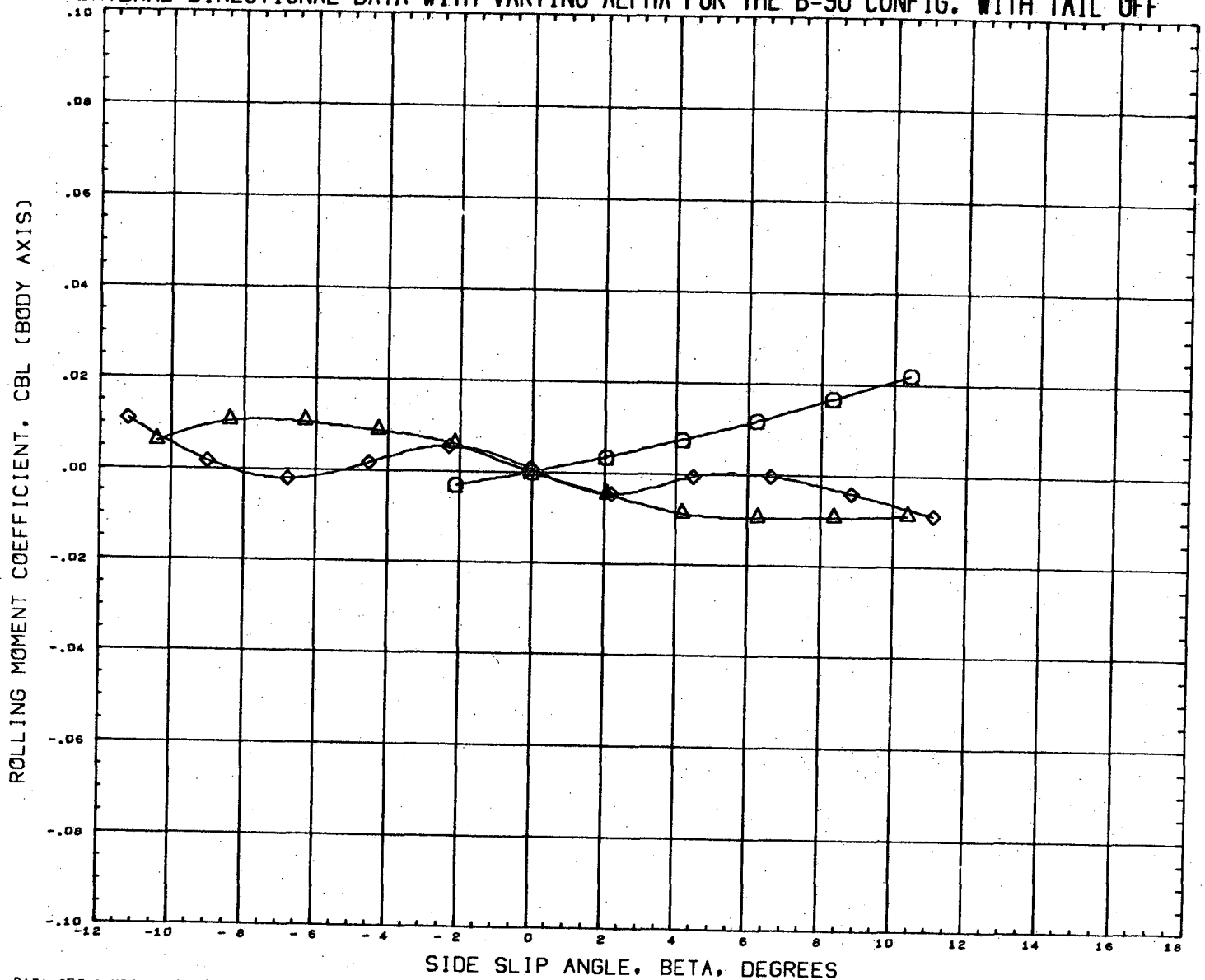
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(A350DA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=0 C=DR=OF	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A350CC)	MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=OF	15.000	0.000	0.000	0.000	LREF 3.0120 IN.
(B350CB)	MSFC TWT-493 GD/C B25W19C8 ALPHA=25 C=DR=OF	25.000	0.000	0.000	0.000	BREF 6.0180 IN.
(B350CA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=DR=OF	30.000	0.000	0.000	0.000	XMRP 7.2990 IN.
	DATA NOT AVAILABLE FOR ALL CONDITIONS					YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.004

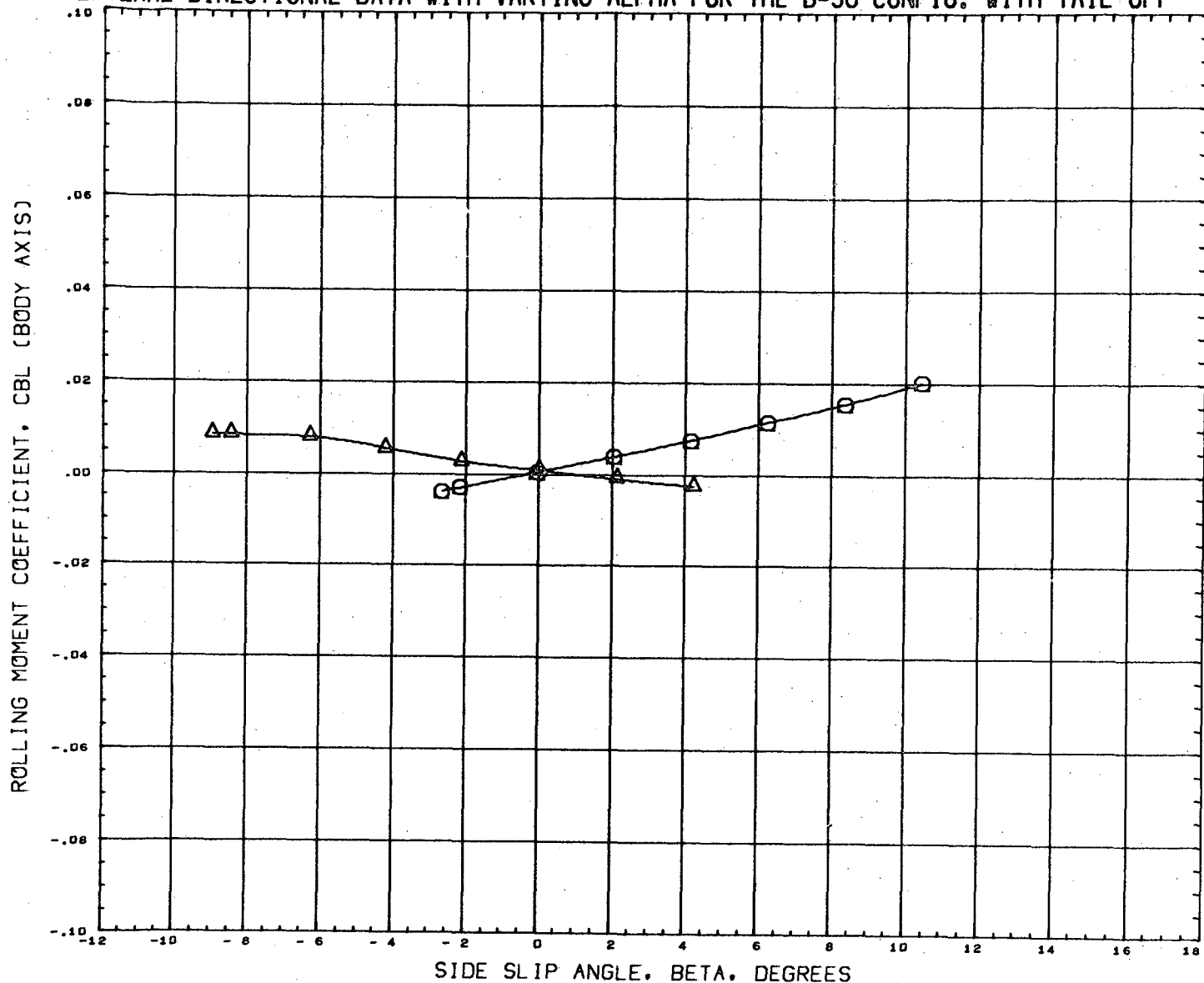
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUBBER	REFERENCE INFORMATION
(A350DA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=0 C=DR=DF	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A350CC)	MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF	15.000	0.000	0.000	0.000	LREF 3.0120 IN.
(B350CB)	MSFC TWT-493 GD/C B25W19C8 ALPHA=25 C=D R=0	25.000	0.000	0.000	0.000	BREF 6.0180 IN.
(B350CA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.196

LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



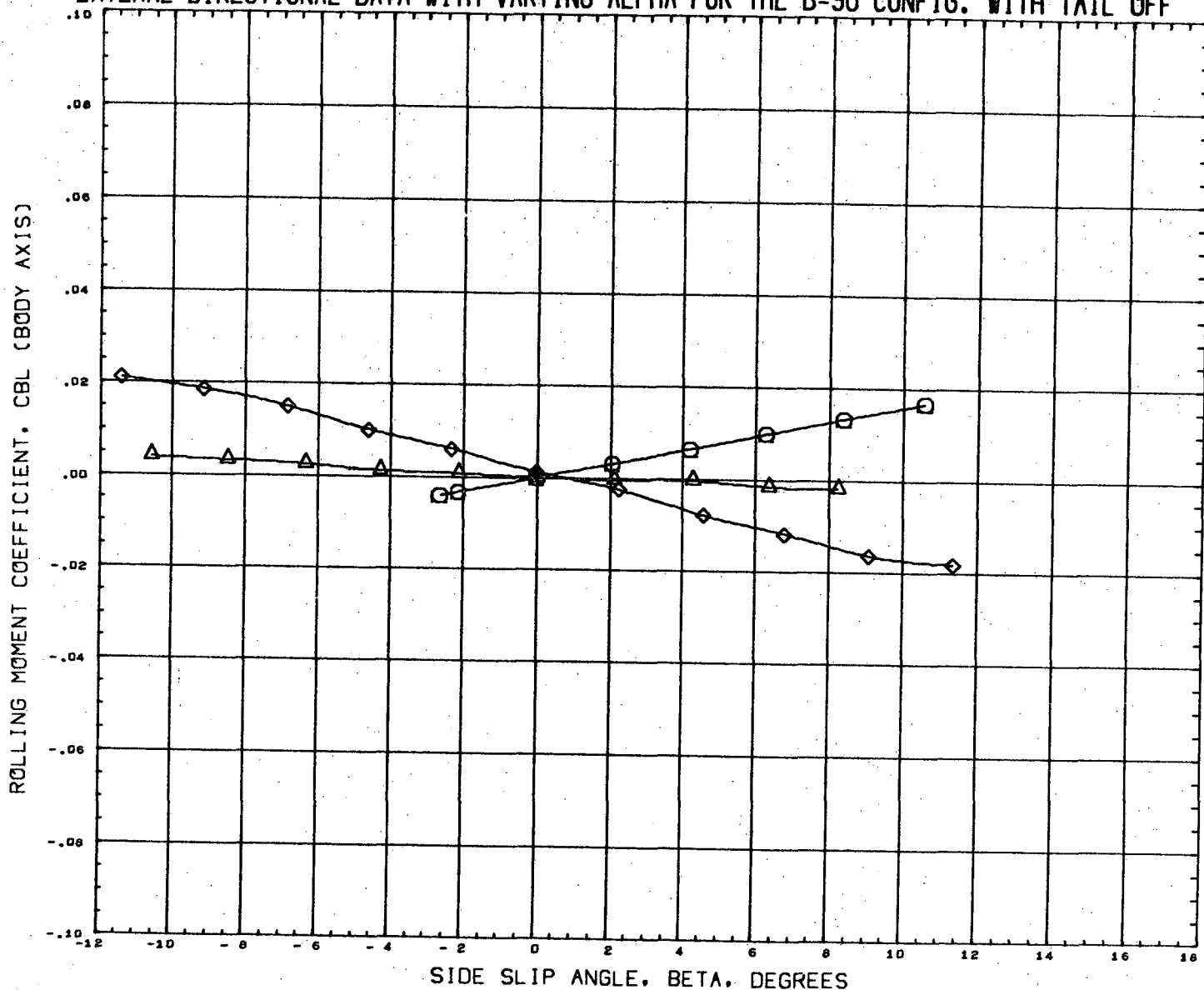
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350DA) MSFC TWT-493 GD/C B25W19C8 ALPHA=0 C=UR=DF
 (A350CC) MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=UR=DF
 (B350CB) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (B350CA) DATA NOT AVAILABLE FOR ALL CONDITIONS

ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
15.000	0.000	0.000	0.000	LREF 3.0120 IN.
25.000	0.000	0.000	0.000	BREF 6.0180 IN.
30.000	0.000	0.000	0.000	XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

MACH 1.466

LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350DA) MSFC TWT-493 GD/C B25W19C8 ALPHA=0 C=DR=DF

(A350CC) MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF

(B350CB) MSFC TWT-493 GD/C B25W19C8 ALPHA=25 C=D R=D

(B350CA) DATA NOT AVAILABLE FOR ALL CONDITIONS

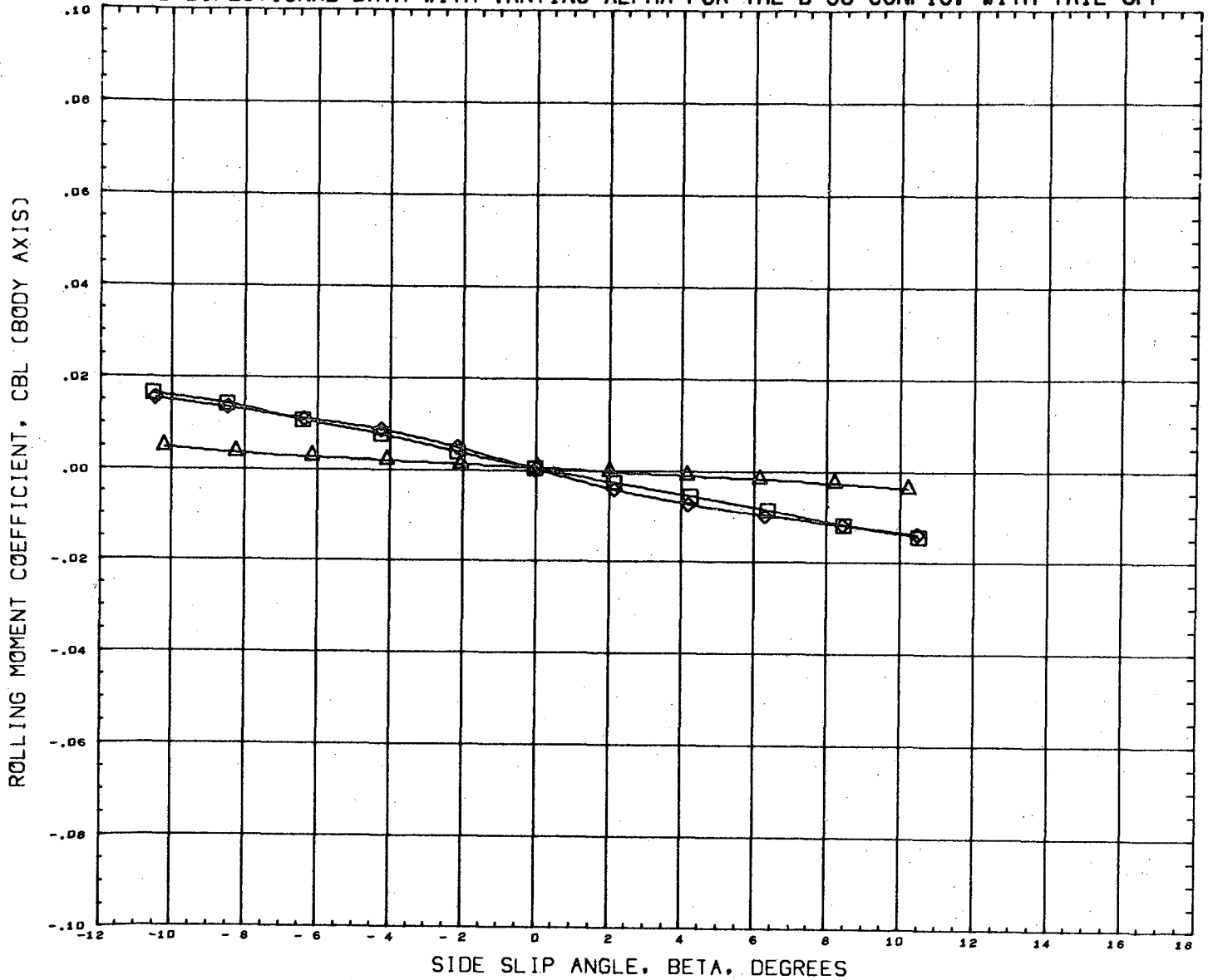
SIDE SLIP ANGLE, BETA, DEGREES

ALPHA	ELEVON	CANARD	RUDDER
0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000
25.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000

REFERENCE INFORMATION	
SREF	14.9040 SQ. IN.
LREF	3.0120 IN.
BREF	6.0180 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0035

MACH 1.950

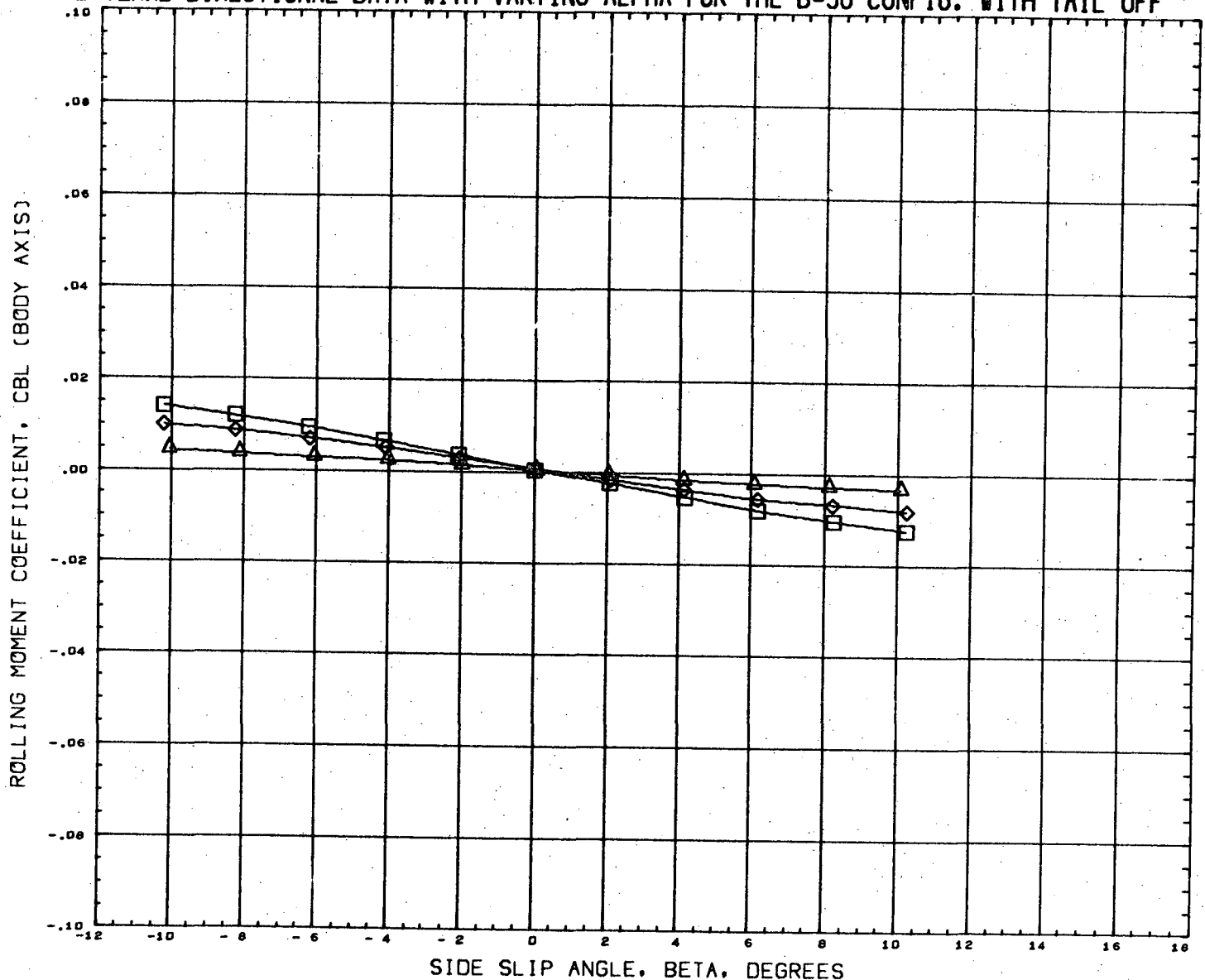
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(A350DA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A350CC)	MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=D R=D	15.000	0.000	0.000	0.000	LREF 3.0120 IN.
(B350CB)	MSFC TWT-493 GD/C B25W19C8 ALPHA=25 C=D R=D	25.000	0.000	0.000	0.000	BREF 6.0180 IN.
(B350CA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=D R=D	30.000	0.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 2.990

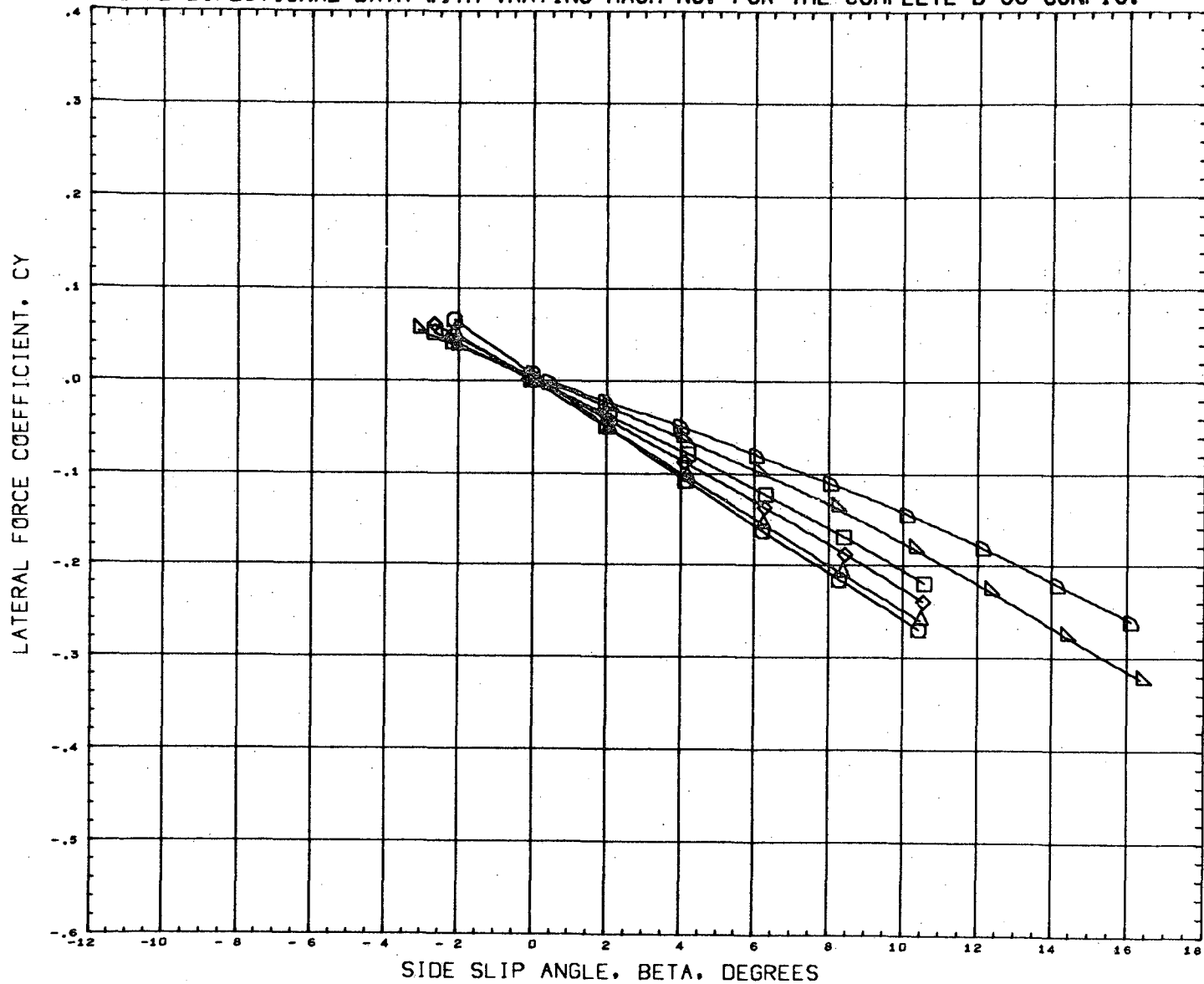
LATERAL-DIRECTIONAL DATA WITH VARYING ALPHA FOR THE B-9U CONFIG. WITH TAIL OFF



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(A350DA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A350CC)	MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=0R=0F	15.000	0.000	0.000	0.000	LREF	3.0120 IN.
(B350CB)	MSFC TWT-493 GD/C B25W19C8 ALPHA=25 C=0 R=0	25.000	0.000	0.000	0.000	BREF	6.0180 IN.
(B350CA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=0 R=0	30.000	0.000	0.000	0.000	XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

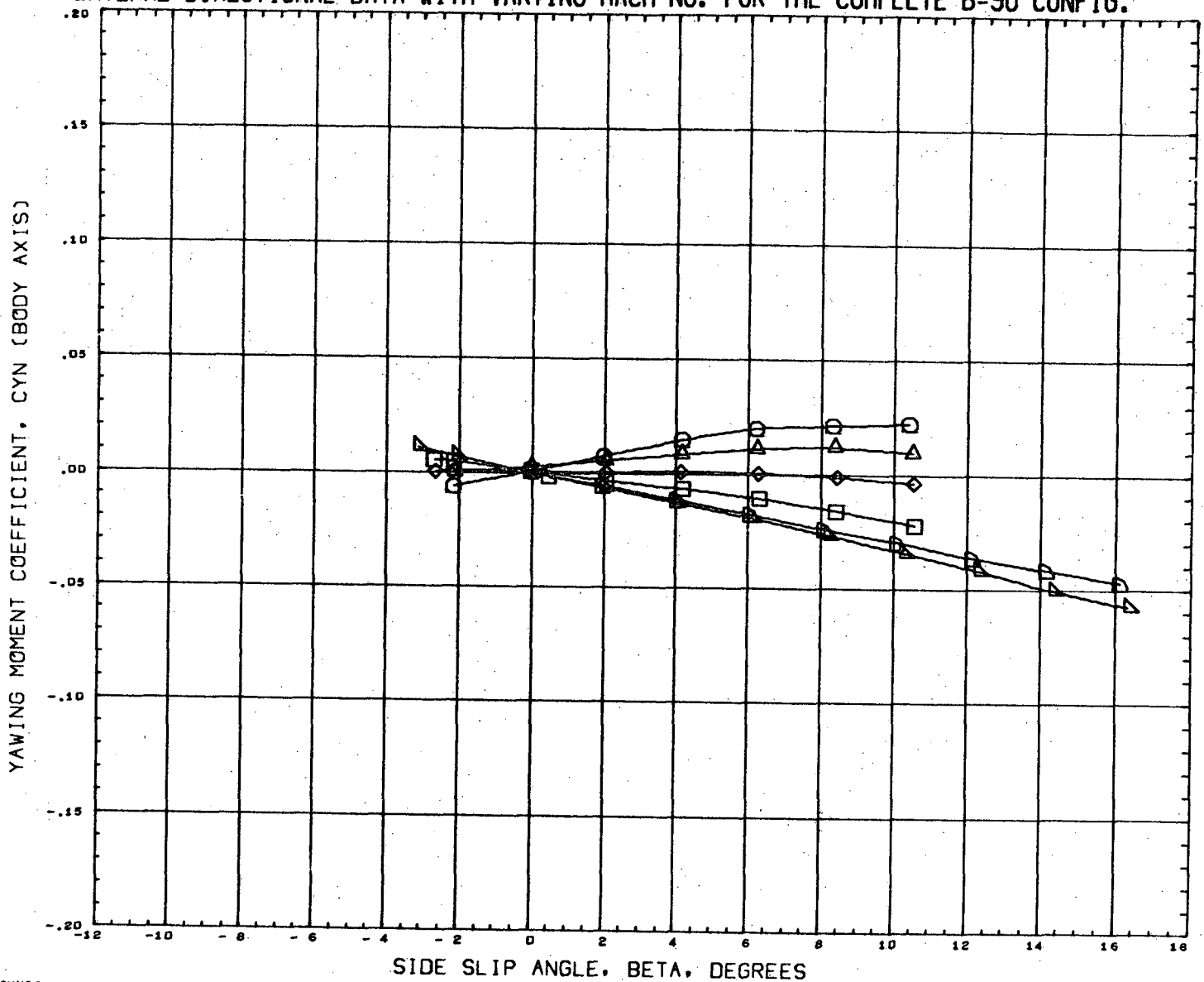
MACH 4.959

LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE COMPLETE B-90 CONFIG.



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
◇	0.996	ALPHA	0.000	ELEVON	0.000	SREF	14.9040	SQ. IN.
◇	1.197	CANARD	0.000	RUDDER	0.000	LREF	3.0120	IN.
◇	1.464					BREF	6.0180	IN.
◇	1.950					XMRP	7.2990	IN.
◇	2.990					YMRP	0.0000	IN.
◇	4.959	DATA HIST. CODE	#A			ZMRP	0.0000	IN.
						SCALE	0.0035	

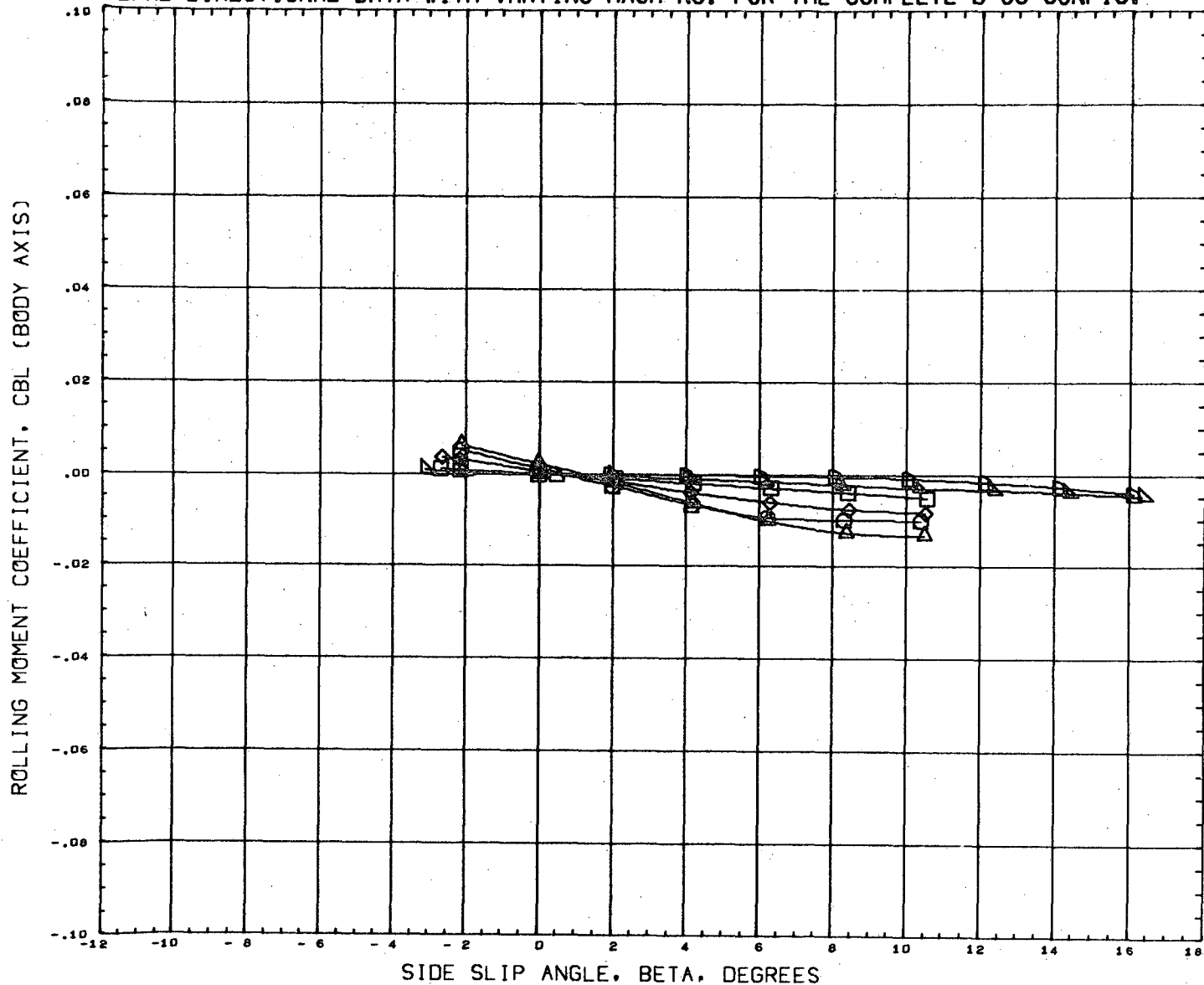
LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE COMPLETE B-90 CONFIG.



SYMBOL	MACH	PARAMETRIC VALUES			
○	0.996	ALPHA	0.000	ELEVON	0.000
□	1.197	CANARD	0.000	RUDDER	0.000
◇	1.464				
△	1.950				
●	2.990				
▲	4.959				
		DATA HIST. CODE	*A		

REFERENCE INFORMATION		
SREF	14.9040	sq. in.
LREF	3.0120	in.
BREF	6.0180	in.
XMRF	7.2990	in.
YMRF	0.0000	in.
ZMRF	0.0000	in.
SCALE	0.0035	

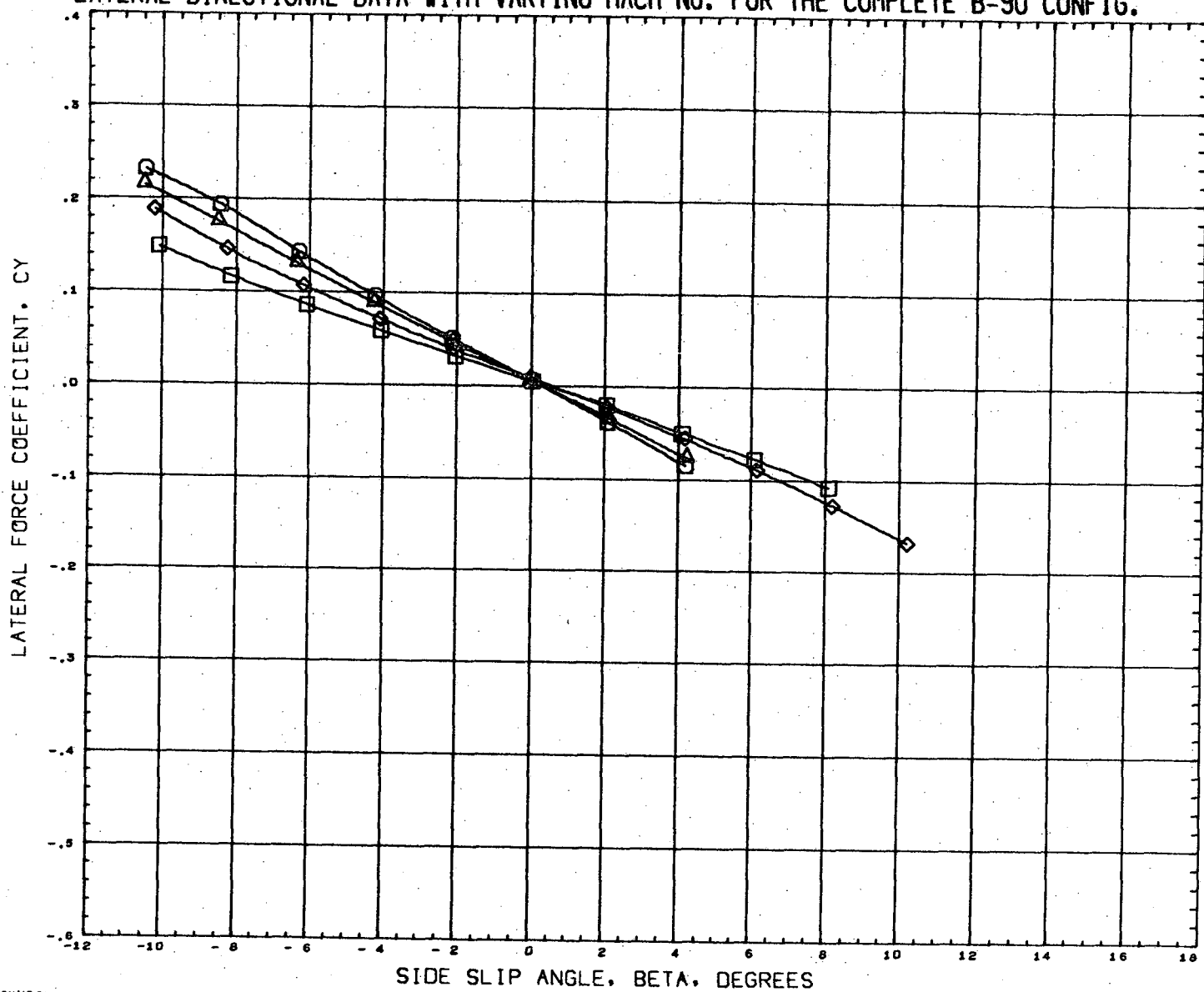
LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE COMPLETE B-9U CONFIG.



SYMBOL	MACH	PARAMETRIC VALUES			
○	0.996	ALPHA	0.000	ELEVON	0.000
□	1.197	CANARD	0.000	RUDDER	0.000
△	1.464				
◇	1.950				
☆	2.990				
✕	4.959	DATA HIST. CODE	*A		

REFERENCE INFORMATION		
SREF	14.9040	sq. in.
LREF	3.0120	in.
BREF	6.0180	in.
XMRF	7.2990	in.
YMRF	0.0000	in.
ZMRF	0.0000	in.
SCALE	0.0035	

LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE COMPLETE B-9U CONFIG.

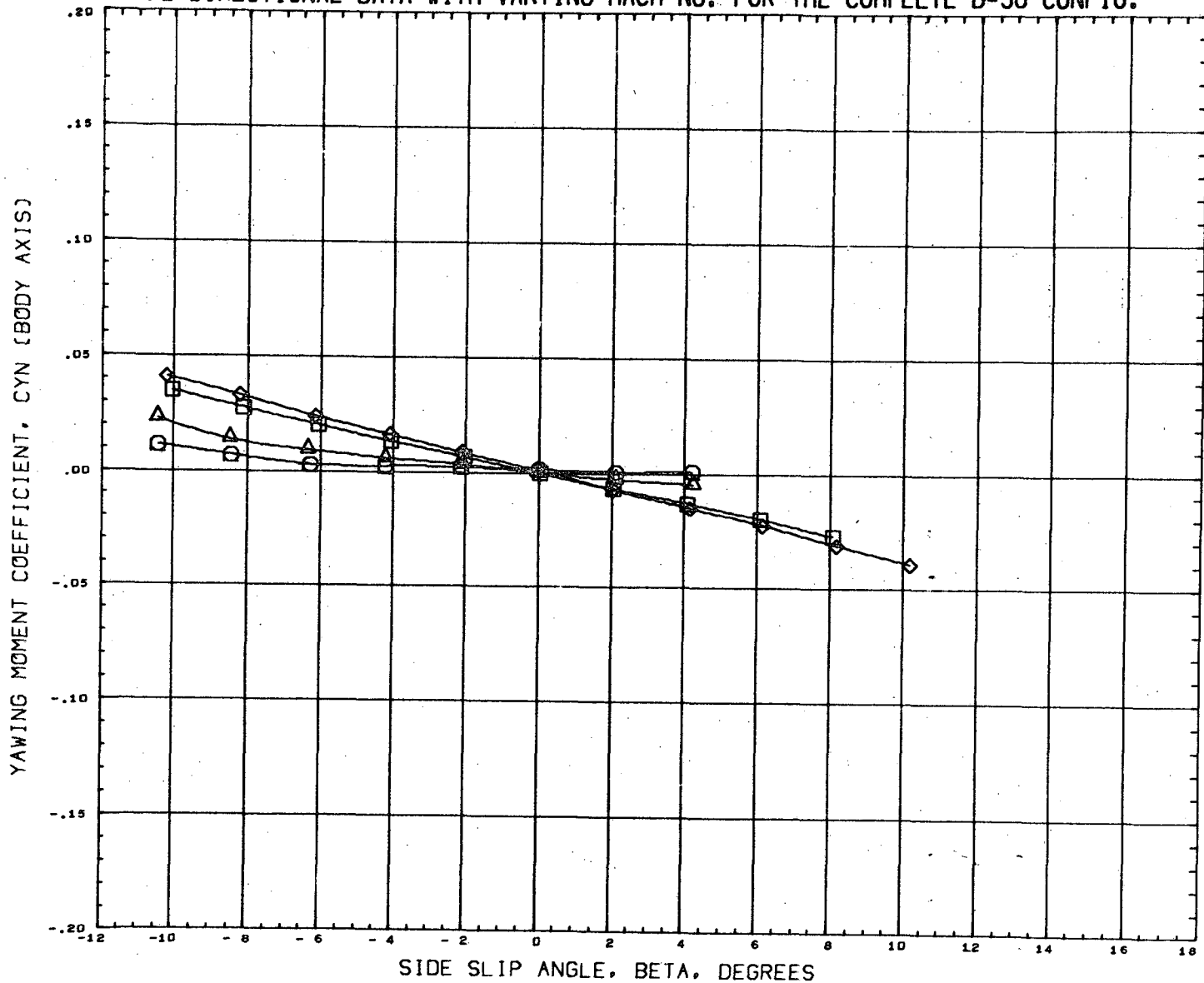


SYMBOL	MACH	PARAMETRIC VALUES
○	1.198	ALPHA 6.000 ELEVON 0.000
△	1.452	CANARD 0.000 RUDDER 0.000
◇	2.990	
□	4.959	

REFERENCE INFORMATION		
SREF	14.9040	59. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

REFERENCE FILE CONVAIR TN-71-AE11

LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE COMPLETE B-9U CONFIG.

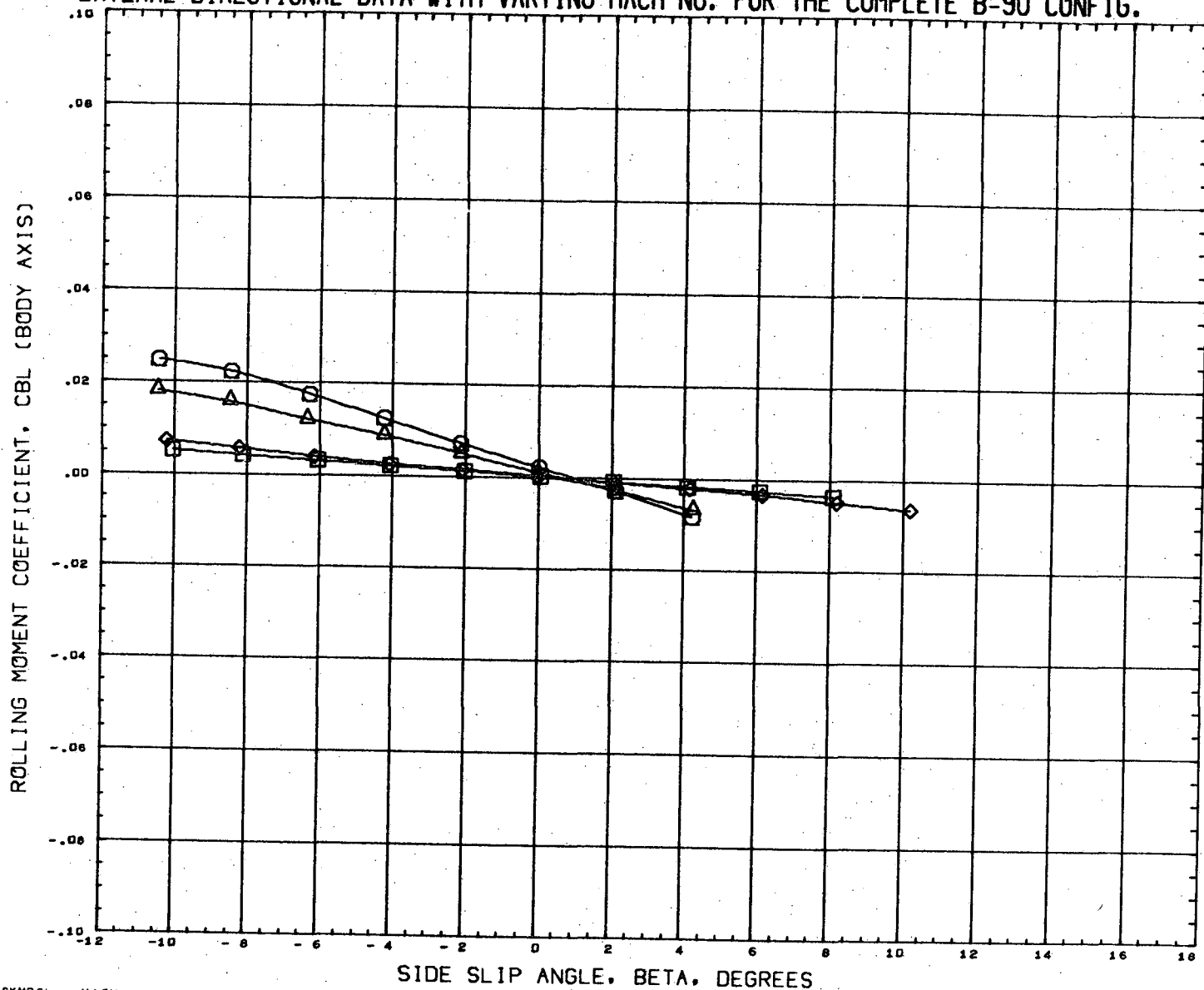


SYMBOL	MACH	PARAMETRIC VALUES			
◇	1.198	ALPHA	6.000	ELEVON	0.000
△	1.452	CANARD	0.000	RUDDER	0.000
□	2.990				
○	4.959				

REFERENCE FILE CONVAIR TN-71-AE11

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE COMPLETE B-9U CONFIG.



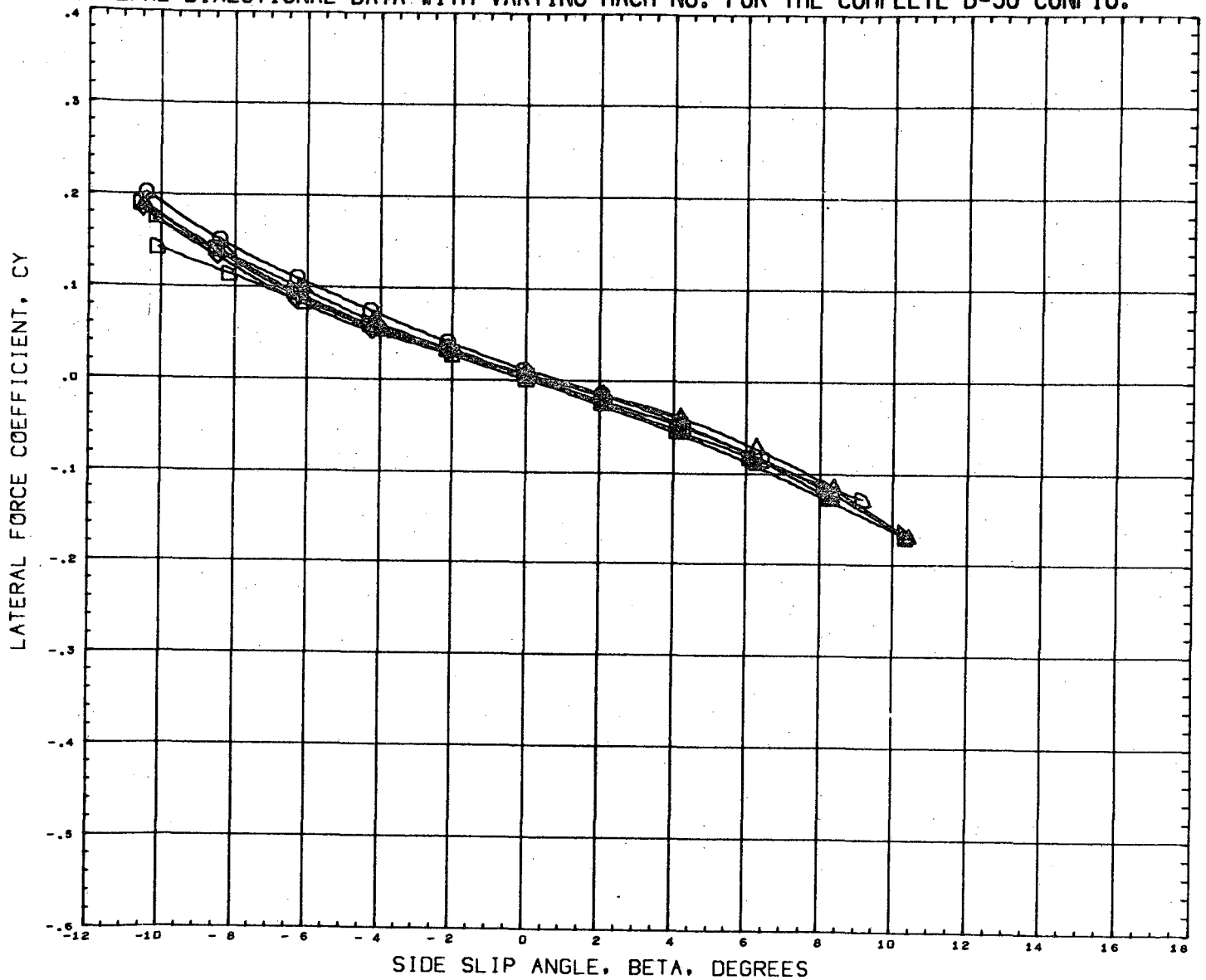
SYMBOL MACH
 ○ 1.198
 △ 1.452
 □ 2.990
 ◇ 4.959

PARAMETRIC VALUES
 ALPHA 6.000 ELEVON 0.000
 CANARD 0.000 RUDDER 0.000

REFERENCE FILE CONVAIR TN-71-AE11

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

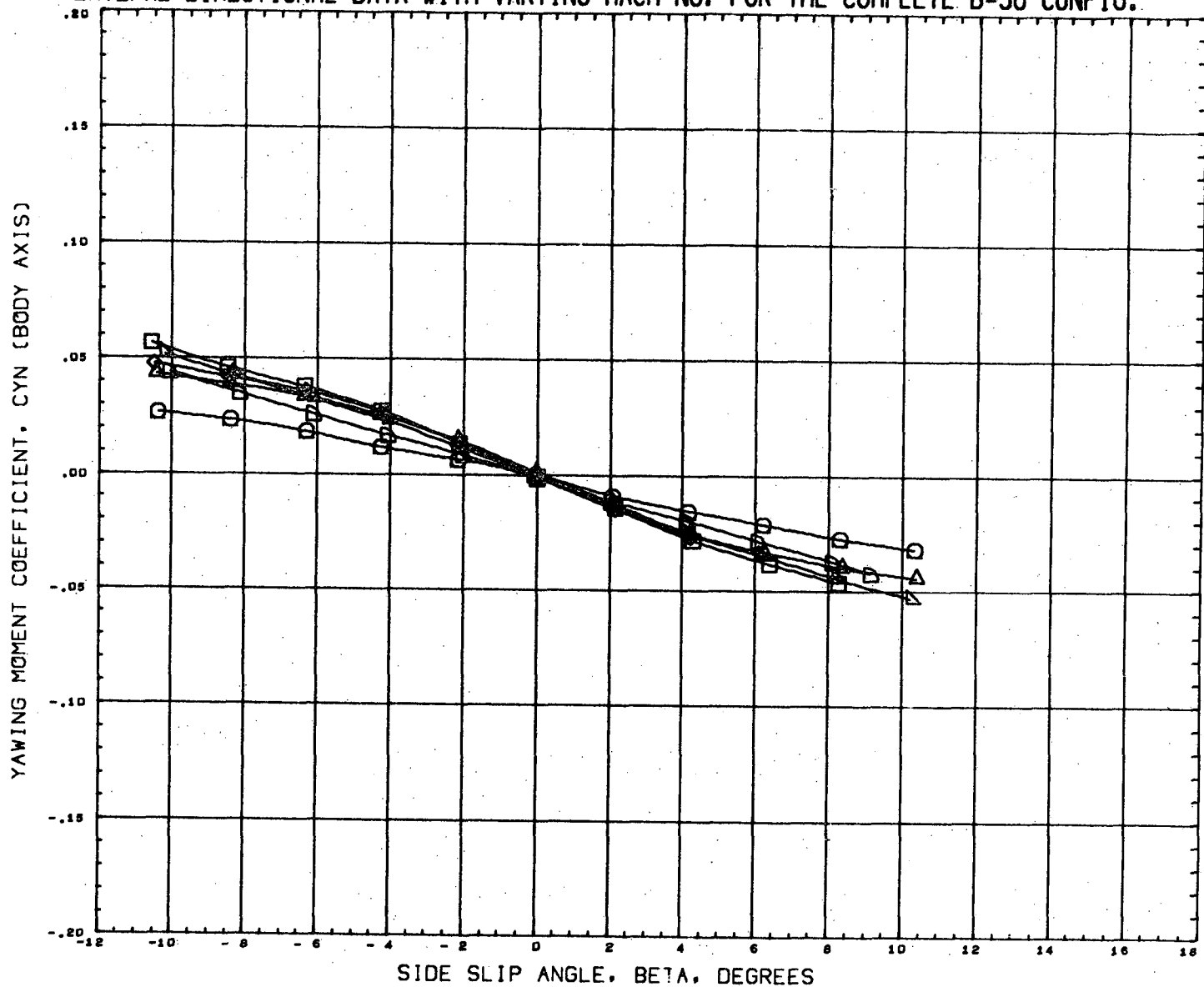
LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE COMPLETE B-9U CONFIG.



SYMBOL	MACH	PARAMETRIC VALUES			
◇	1.001	ALPHA	15.000	ELEVON	0.000
◇	1.189	CANARD	0.000	RUDDER	0.000
◇	1.464				
◇	1.963				
◇	2.990				
◇	4.959	REFERENCE FILE	CONVAIR TN-71-AE11		

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

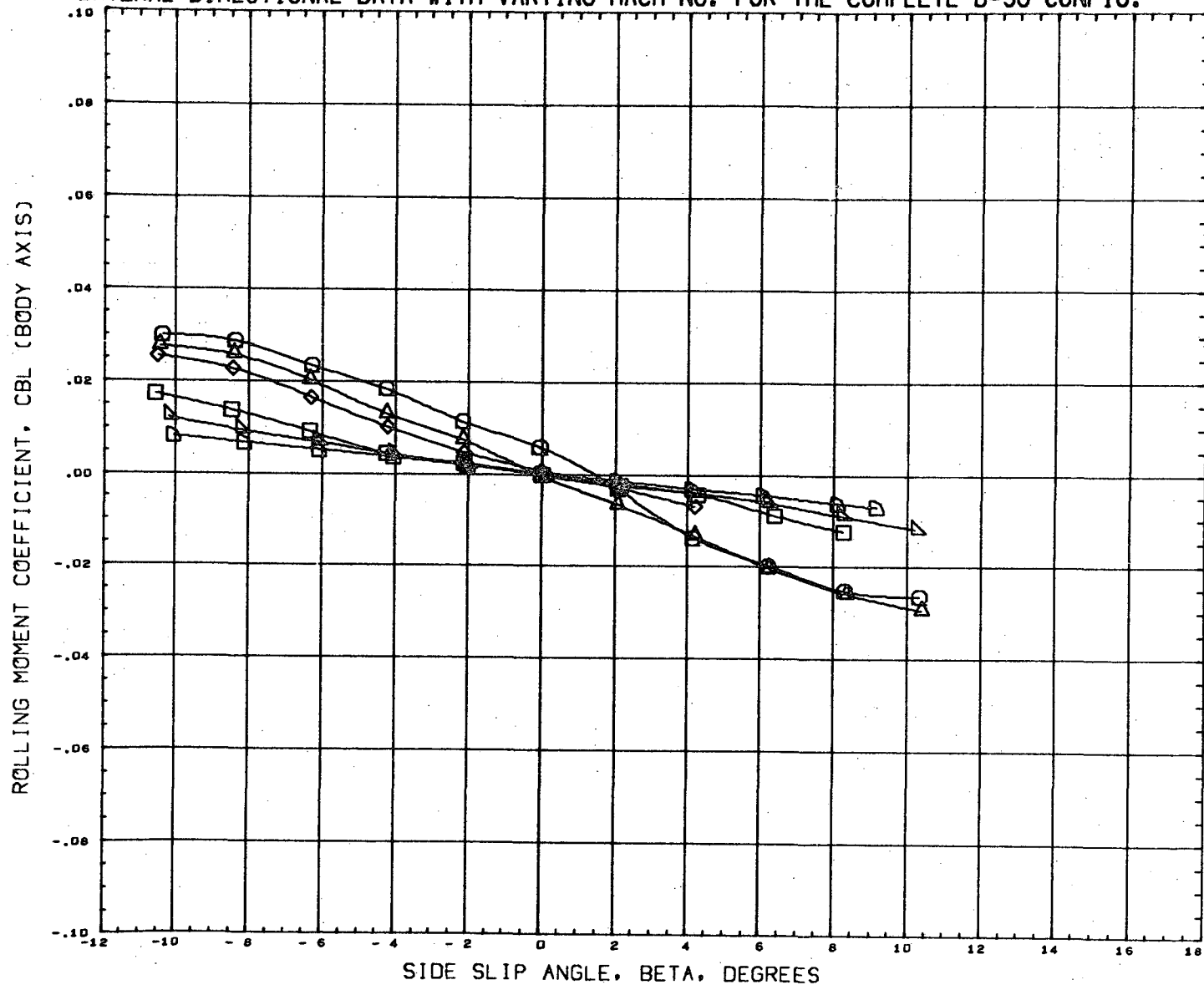
LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE COMPLETE B-9U CONFIG.



SYMBOL	MACH	PARAMETRIC VALUES			
○	1.001	ALPHA	15.000	ELEVON	0.000
◇	1.189	CANARD	0.000	RUDDER	0.000
◊	1.464				
□	1.963				
◻	2.990				
◼	4.990				
		REFERENCE FILE CONVAIR TN-71-AE11			

REFERENCE INFORMATION		
SREF	14.9040	50. IN.
LREF	3.0120	IN.
BREF	6.0100	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

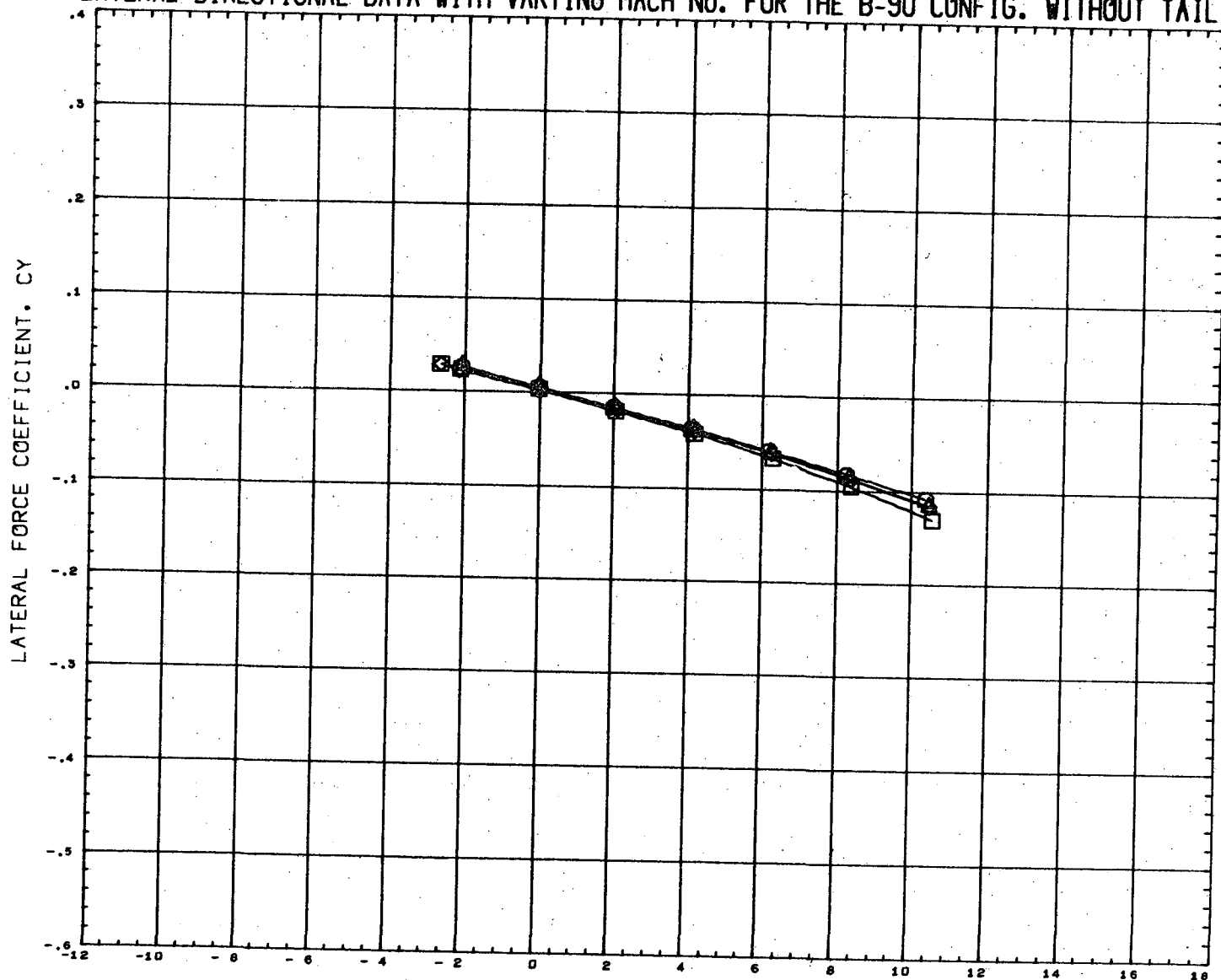
LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE COMPLETE B-9U CONFIG.



SYMBOL	MACH	PARAMETRIC VALUES			
○	1.001	ALPHA	15.000	ELEVON	0.000
◇	1.189	CANARD	0.000	RUDDER	0.000
△	1.464				
□	1.963				
▽	2.990				
◇	4.959	REFERENCE FILE	CONVAIR TN-71-AE11		

REFERENCE INFORMATION		
SREF	14.9040	sq. in.
LREF	3.0120	in.
BREF	6.0180	in.
XMRF	7.2990	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0035	

LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE B-9U CONFIG. WITHOUT TAIL

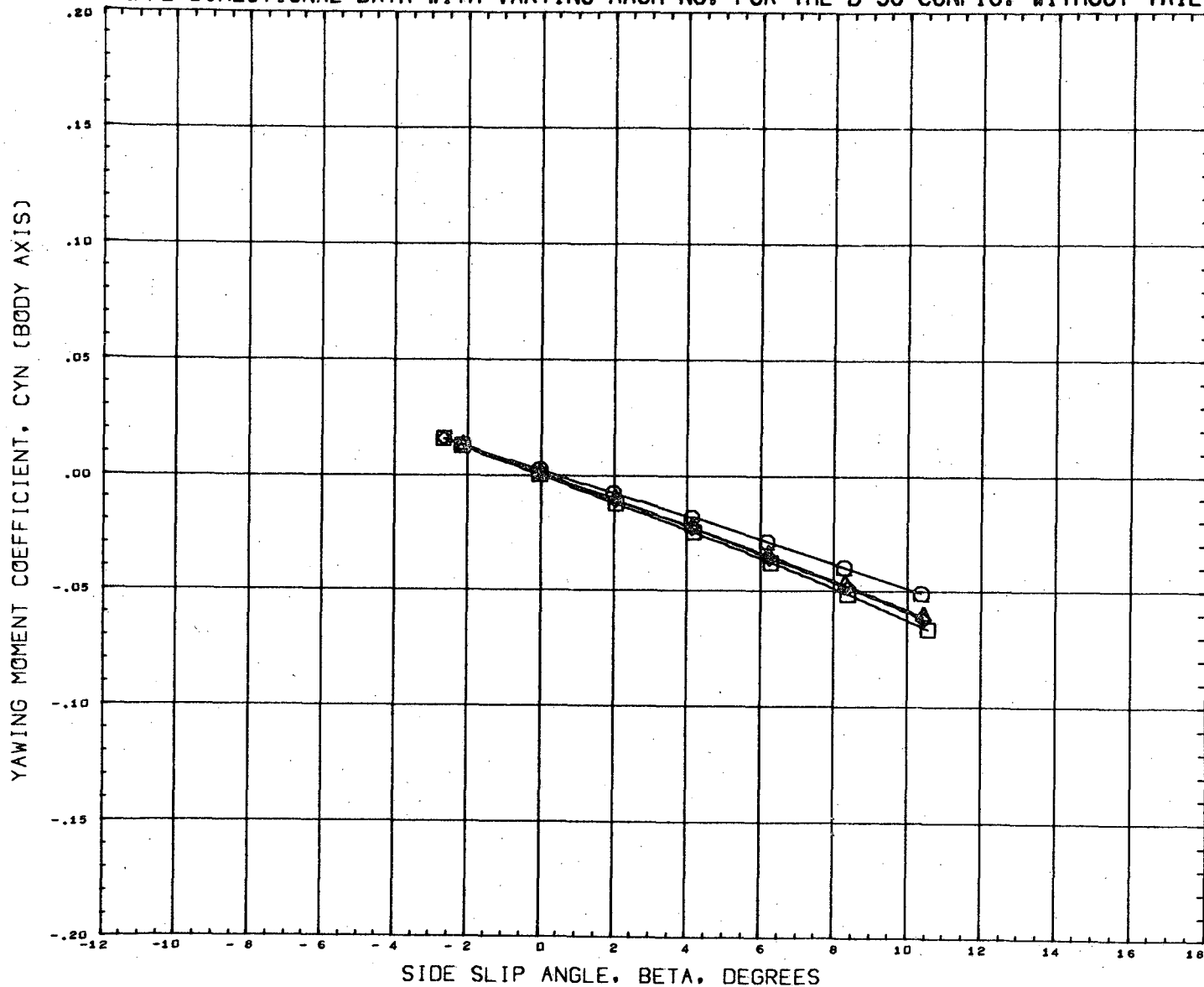


SYMBOL	MACH	PARAMETRIC VALUES			
○	1.004	ALPHA	0.000	ELEVON	0.000
△	1.196	CANARD	0.000	RUDDER	0.000
◇	1.466				
□	1.950				

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	IN.

REFERENCE FILE CONVAIR TN-71-AE11

LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE B-9U CONFIG. WITHOUT TAIL

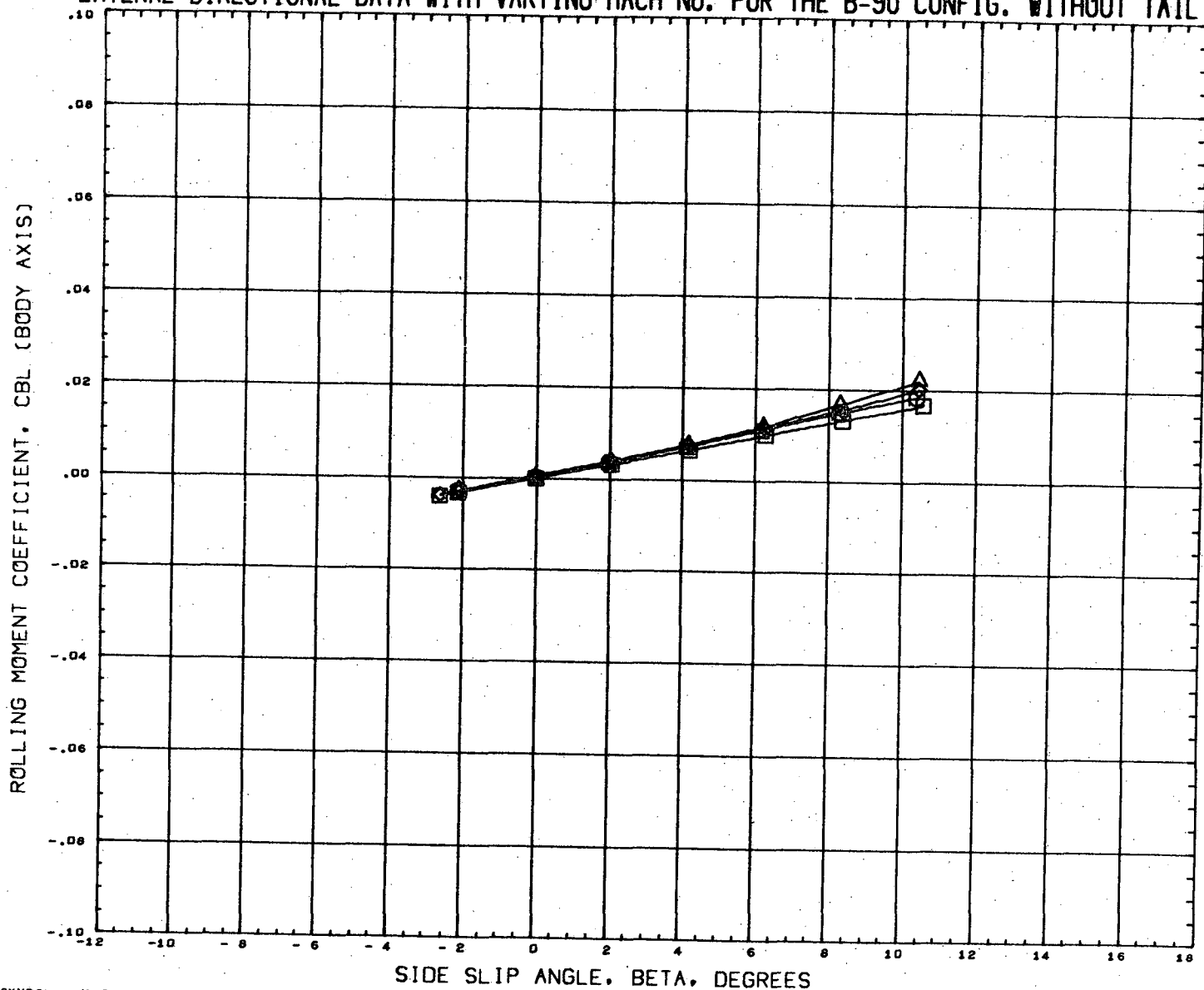


SYMBOL	MACH	PARAMETRIC VALUES			
○	1.004	ALPHA	0.000	ELEVON	0.000
◇	1.196	CANARD	0.000	RUDDER	0.000
△	1.466				
□	1.950				

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	IN.

REFERENCE FILE: CONVAIR TN-71-AE11

LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE B-9U CONFIG. WITHOUT TAIL



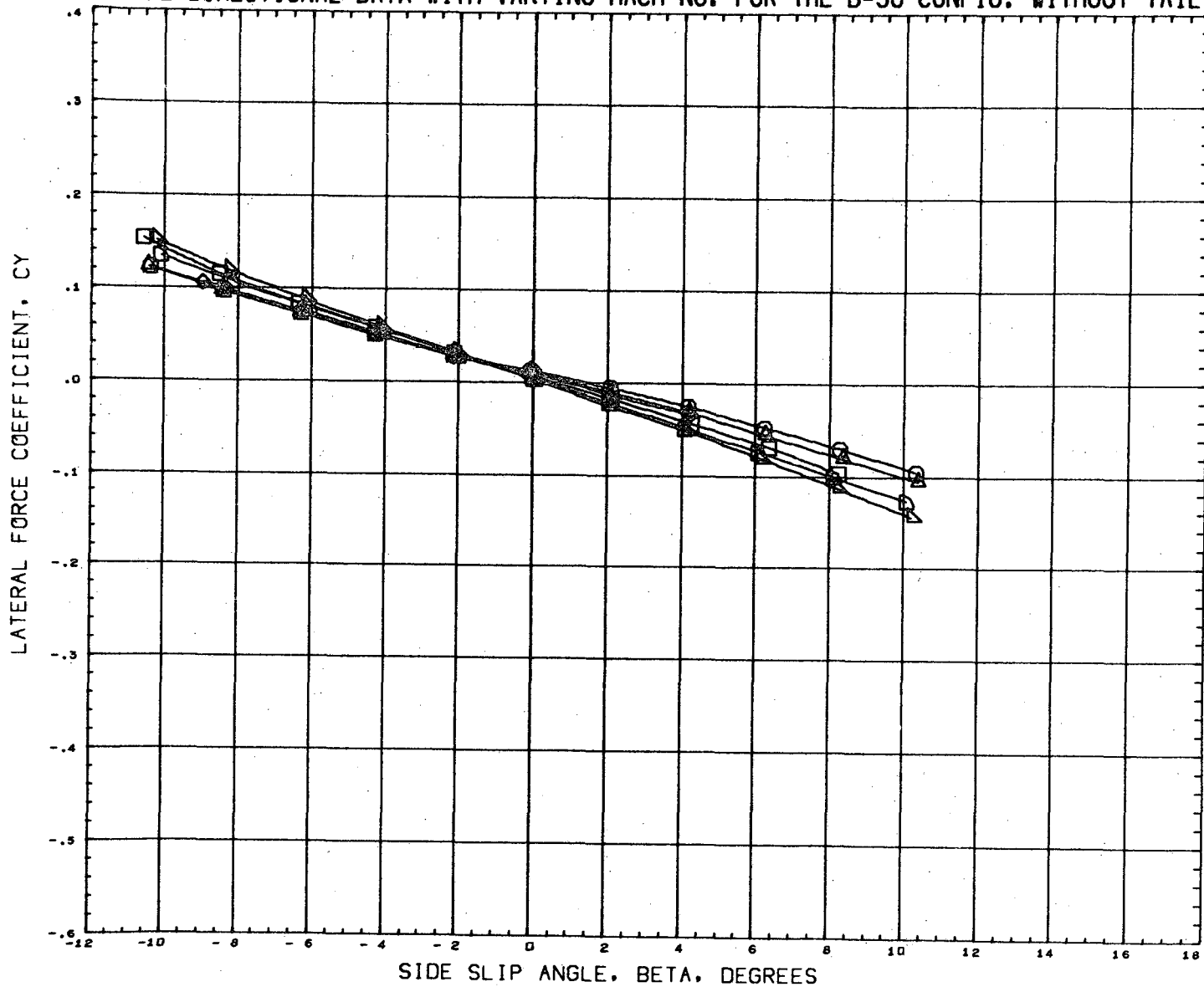
SYMBOL

MACH	PARAMETRIC VALUES
1.004	ALPHA 0.000 ELEVON 0.000
1.196	CANARD 0.000 RUDDER 0.000
1.466	
1.950	

REFERENCE FILE CONVAIR TN-71-AE11

REFERENCE INFORMATION		
SREF	14.9040	sq. in.
LREF	3.0120	in.
BREF	6.0160	in.
XMRP	7.2990	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0035	

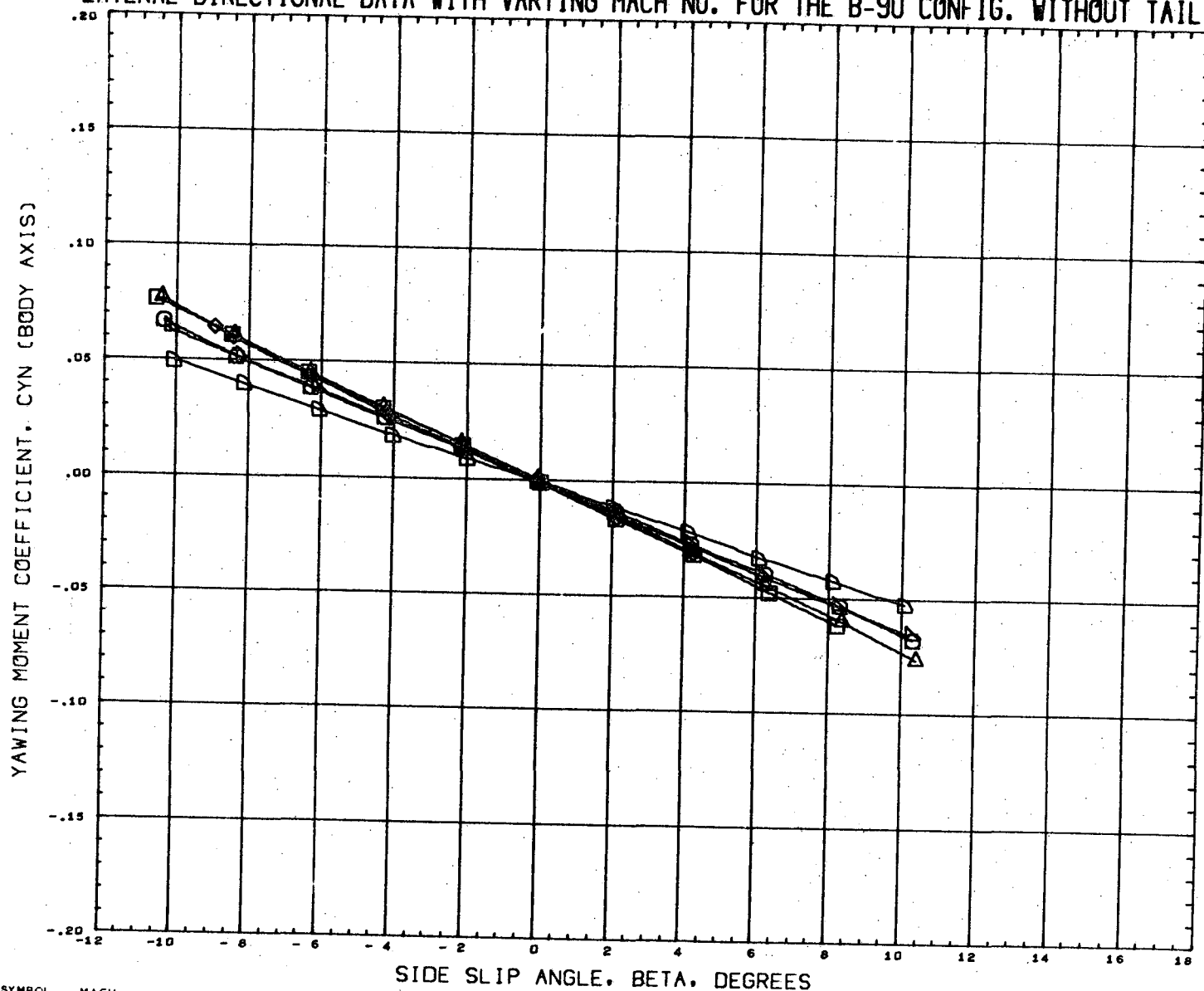
LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE B-90 CONFIG. WITHOUT TAIL



SYMBOL	MACH	PARAMETRIC VALUES			
□	0.992	ALPHA	15.000	ELEVON	0.000
◇	1.192	CANARD	0.000	RUDDER	0.000
△	1.469				
○	1.964				
×	2.990				
	4.959	REFERENCE FILE CONVAIR TN-71-AE11			

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE B-9U CONFIG. WITHOUT TAIL



SYMBOL	MACH	PARAMETRIC VALUES			
○	0.992	ALPHA	15.000	ELEVON	0.000
□	1.192	CANARD	0.000	RUDDER	0.000
◇	1.469				
△	1.964				
×	2.990				
	4.959	REFERENCE FILE	CONVAIR TN-71-AE11		

REFERENCE INFORMATION		
SREF	14.9040	50. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

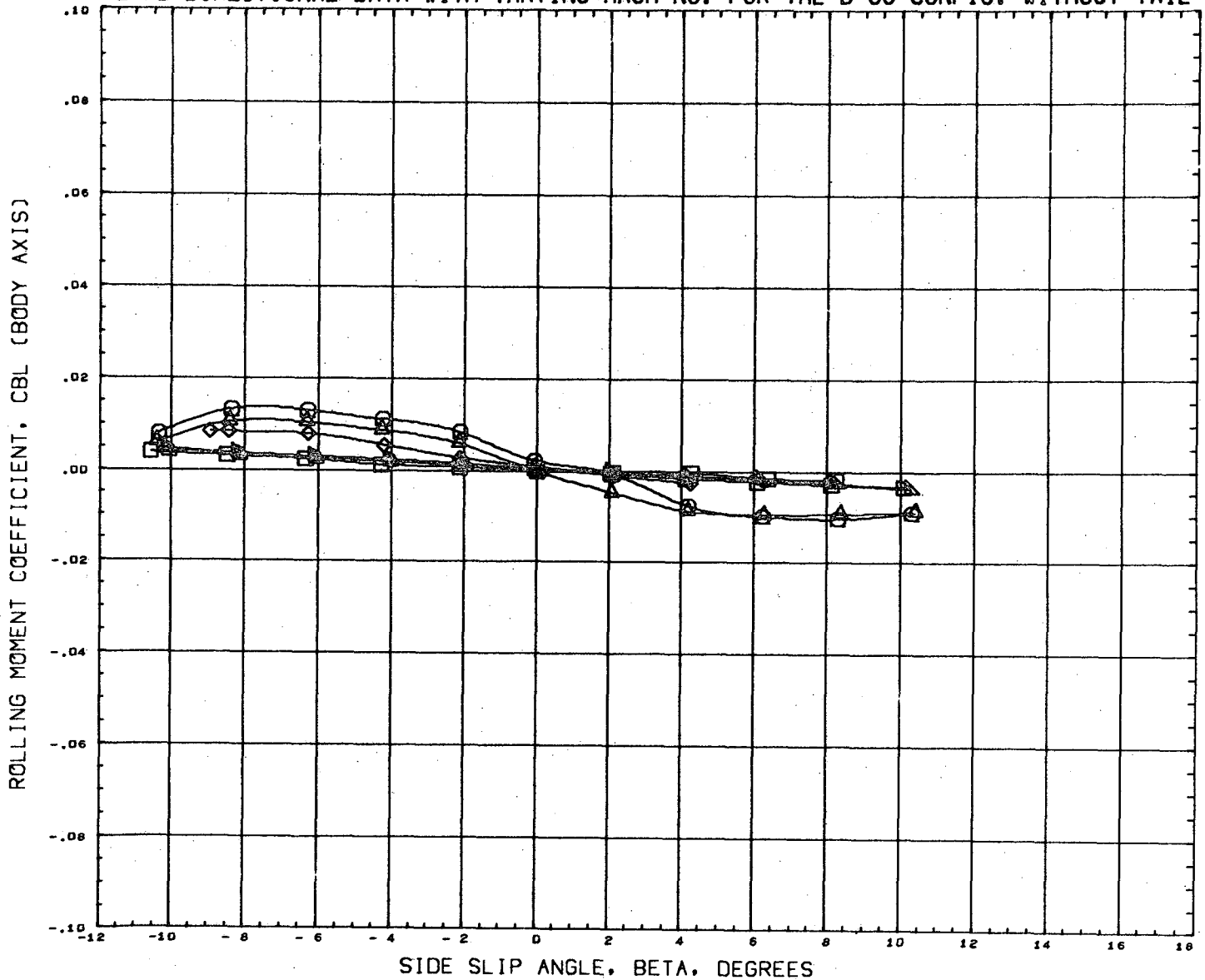
MSFC TWT-493 GD/C B25W19C8

ALPHA=15 C=0R=0F (A350CC)

04 AUG 71

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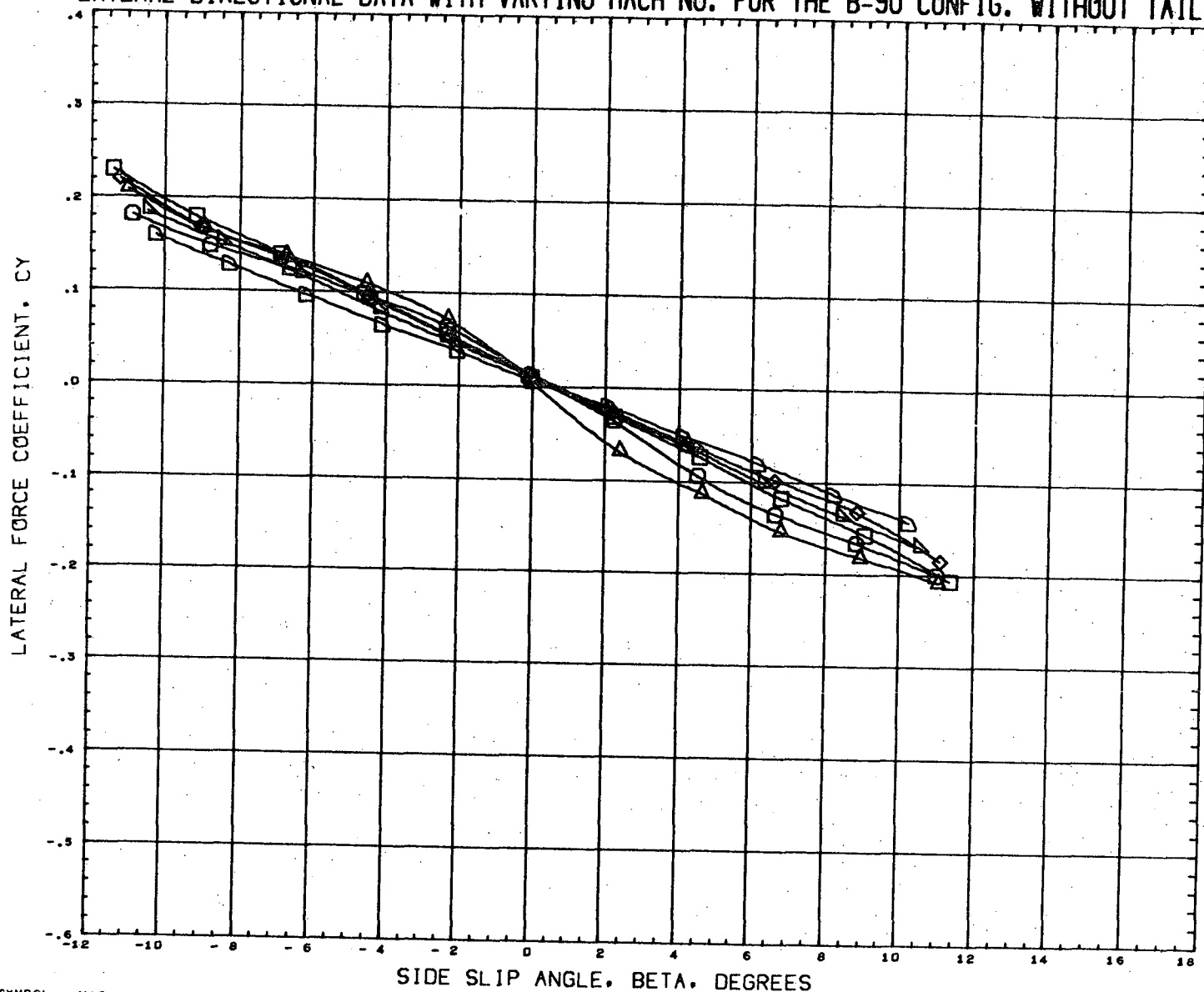
LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE B-9U CONFIG. WITHOUT TAIL



SYMBOL	MACH	PARAMETRIC VALUES			
○	0.992	ALPHA	15.000	ELEVON	0.000
◇	1.192	CANARD	0.000	RUDDER	0.000
△	1.469				
□	1.964				
▽	2.990				
◇	4.959	REFERENCE FILE	CONVAIR TN-71-AE11		

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE B-9U CONFIG. WITHOUT TAIL



SYMBOL	MACH	PARAMETRIC VALUES
□	0.893	ALPHA 25.000 ELEVON 0.000
◇	1.001	CANARD 0.000 RUDDER 0.000
△	1.197	
▽	1.967	
◇	2.990	
□	4.959	

REFERENCE FILE CONVAIR TN-71-AE11

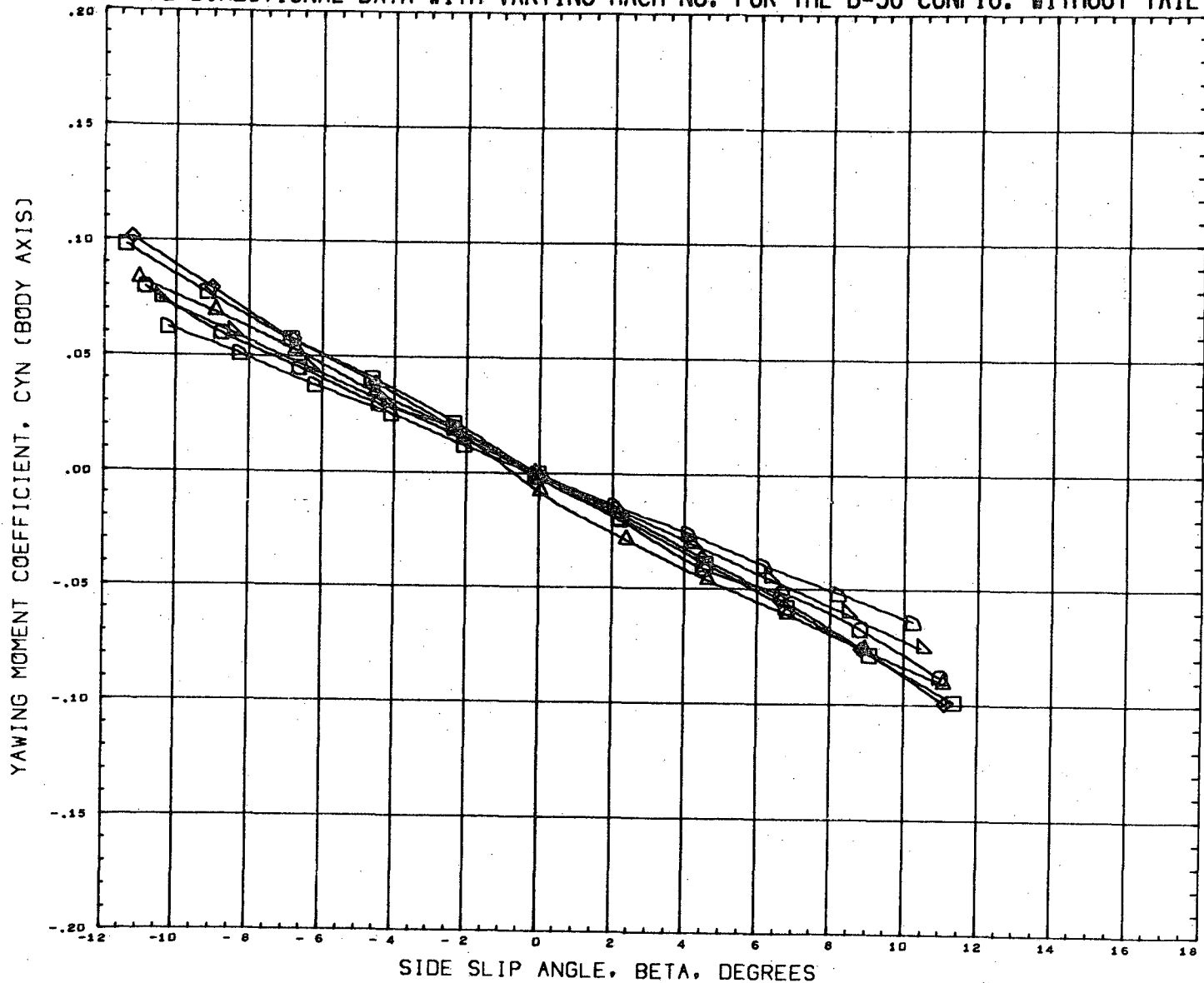
REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MSFC TWT-493 GD/C B25W19C8

ALPHA=25 C=0 R=0 (A350CB) 04 AUG 71

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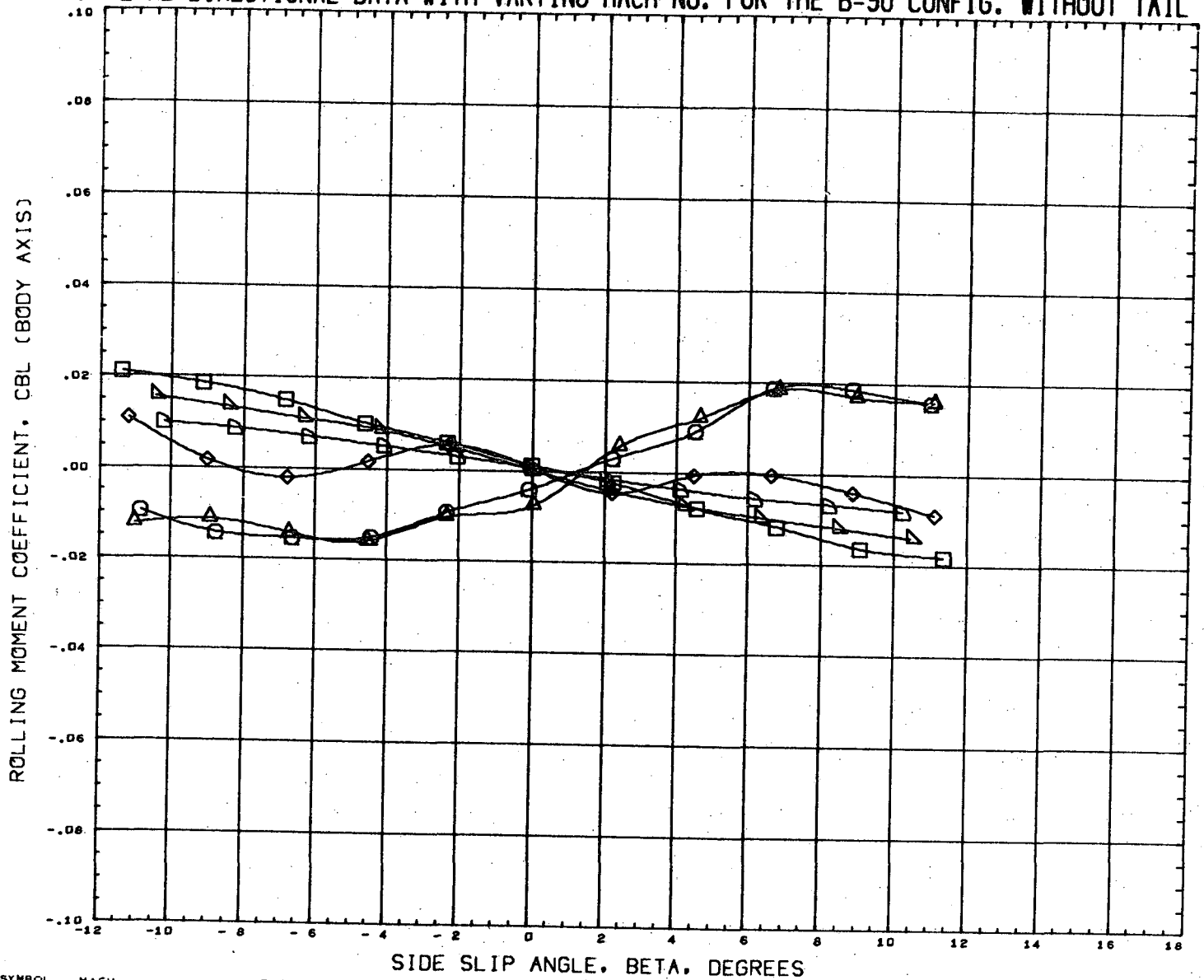
LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE B-9U CONFIG. WITHOUT TAIL



SYMBOL	MACH	PARAMETRIC VALUES			
◇	0.893	ALPHA	25.000	ELEVON	0.000
◇	1.001	CANARD	0.000	RUDDER	0.000
◇	1.197				
◇	1.967				
◇	2.990				
◇	4.959				
	REFERENCE FILE CONVAIR TN-71-AE11				

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

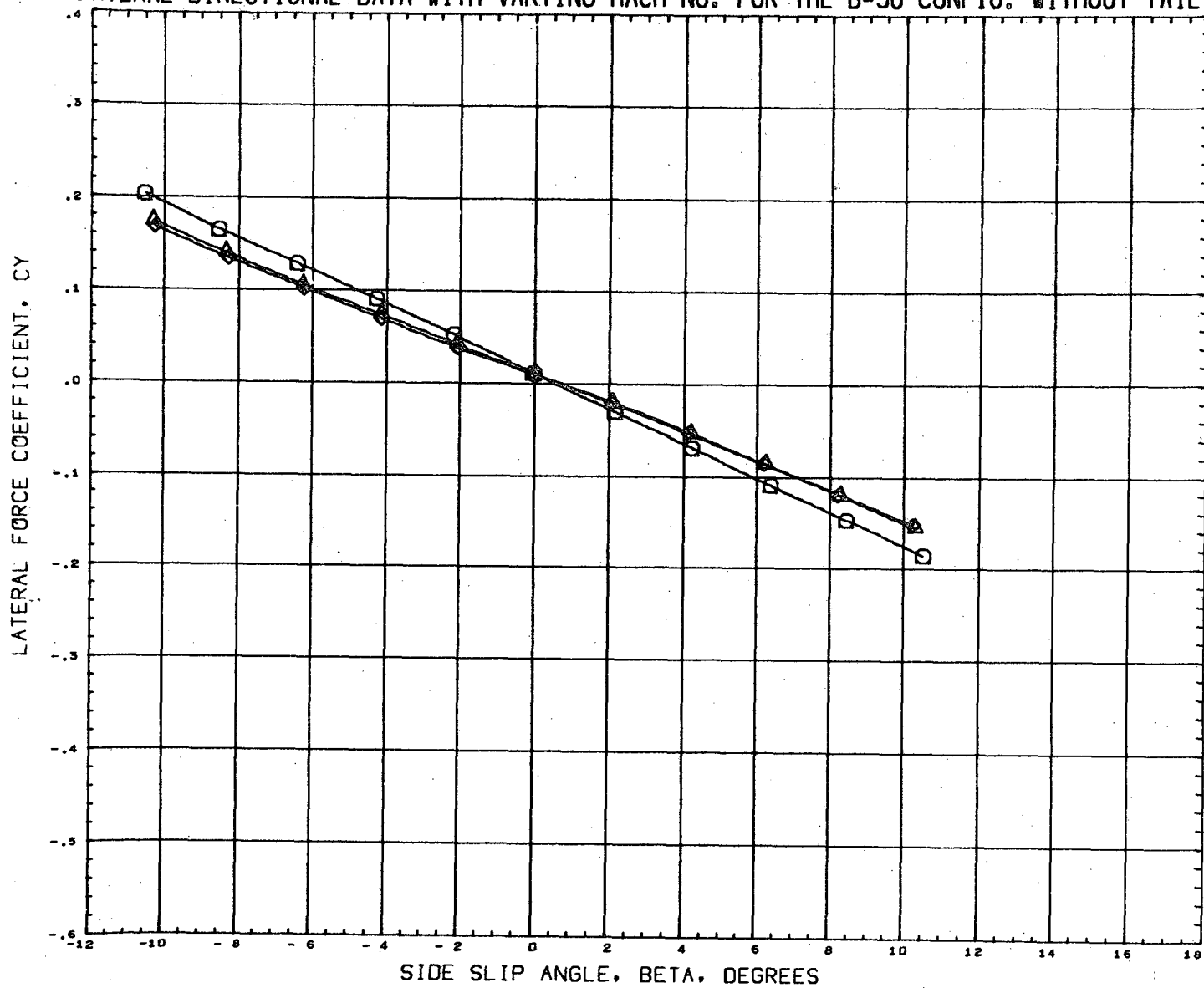
LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE B-9U CONFIG. WITHOUT TAIL



SYMBOL	MACH	PARAMETRIC VALUES			
○	0.893	ALPHA	25.000	ELEVON	0.000
△	1.001	CANARD	0.000	RUDDER	0.000
◇	1.197				
□	1.967				
▽	2.990				
+	4.959				
	REFERENCE FILE CONVAIR TN-71-AE11				

REFERENCE INFORMATION		
SREF	14.9040	Sq. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE B-9U CONFIG. WITHOUT TAIL



SYMBOL	MACH	PARAMETRIC VALUES			
	2.990	ALPHA	30.000	ELEVON	0.000
	4.450	CANARD	0.000	RUDDER	0.000
	4.959				

REFERENCE INFORMATION		
SREF	14.9040	SG. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

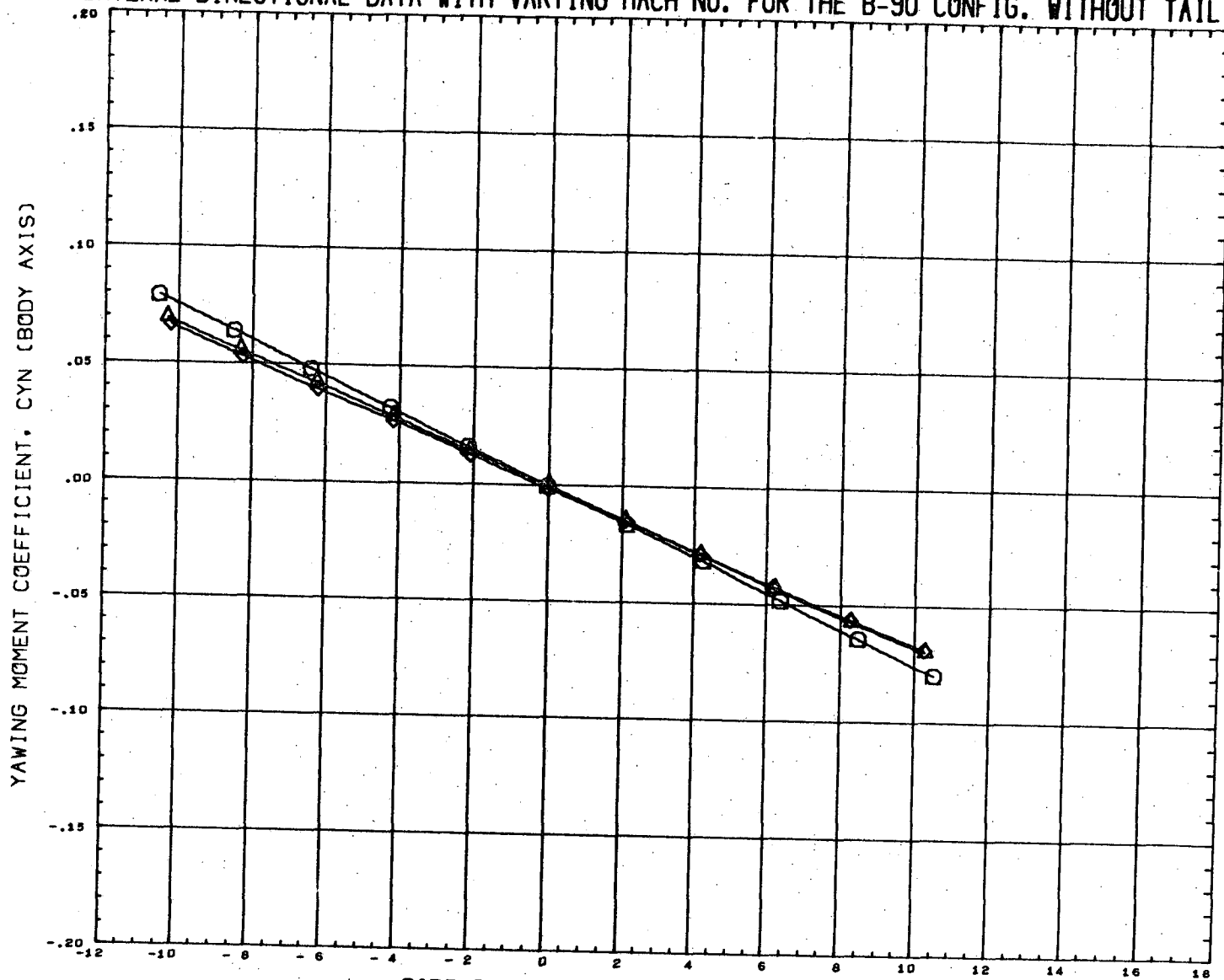
REFERENCE FILE CONVAIR TN-71-AE11

MSFC TWT-493 GD/C B25W19C8

ALPHA=30 C=0 R=0 (A350CA) 04 AUG 71

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LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE B-9U CONFIG. WITHOUT TAIL

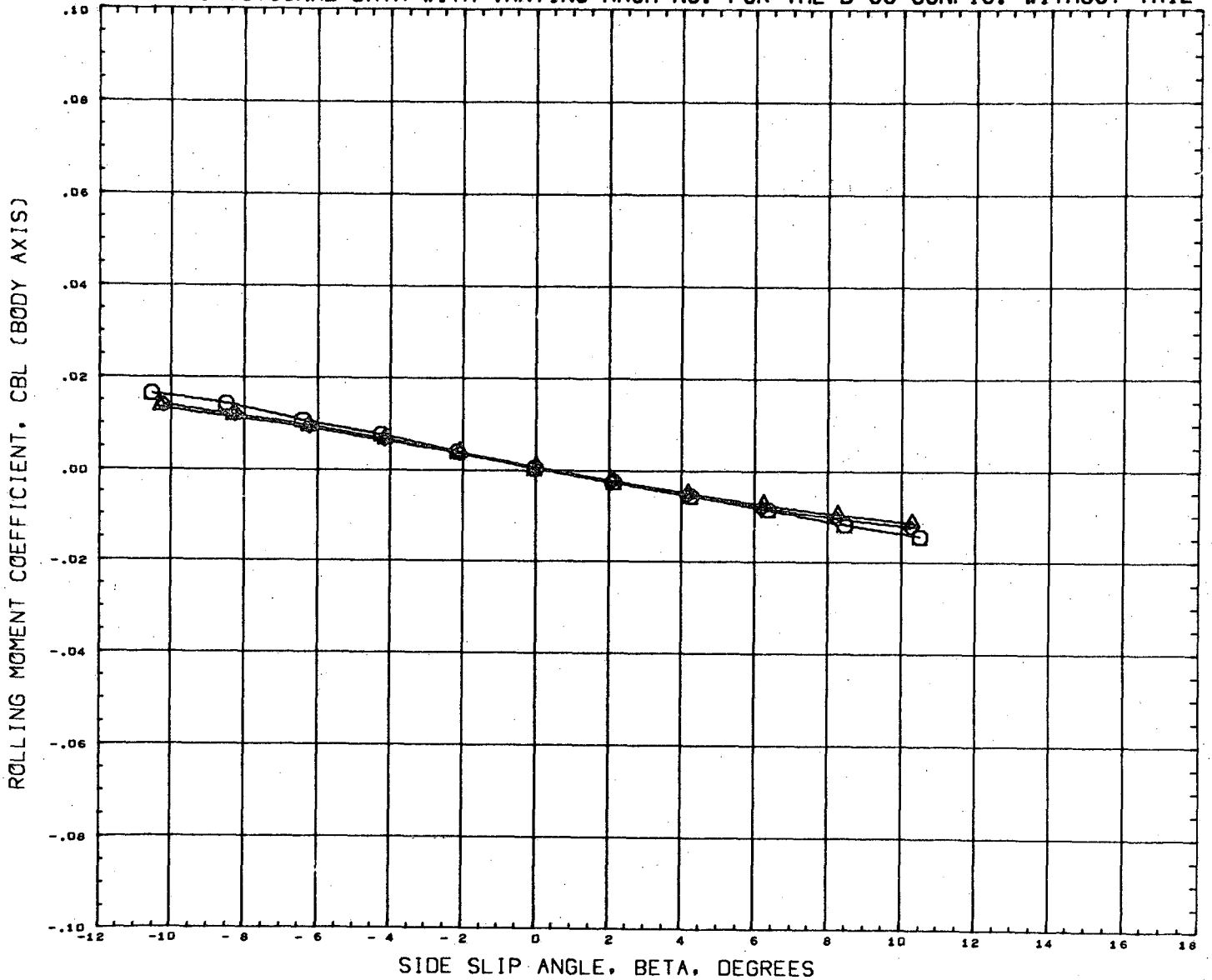


SYMBOL	MACH	PARAMETRIC VALUES		
○	2.990	ALPHA	30.000	ELEVON 0.000
△	4.450	CANARD	0.000	RUDGER 0.000
◇	4.959			

REFERENCE INFORMATION		
SREF	14.9040	50. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

REFERENCE FILE CONVAIR TN-71-AE11

LATERAL-DIRECTIONAL DATA WITH VARYING MACH NO. FOR THE B-9U CONFIG. WITHOUT TAIL



SYMBOL	MACH	PARAMETRIC VALUES			
○	2.990	ALPHA	30.000	ELEVON	0.000
△	4.450	CANARD	0.000	RUDDER	0.000
◇	4.959				

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

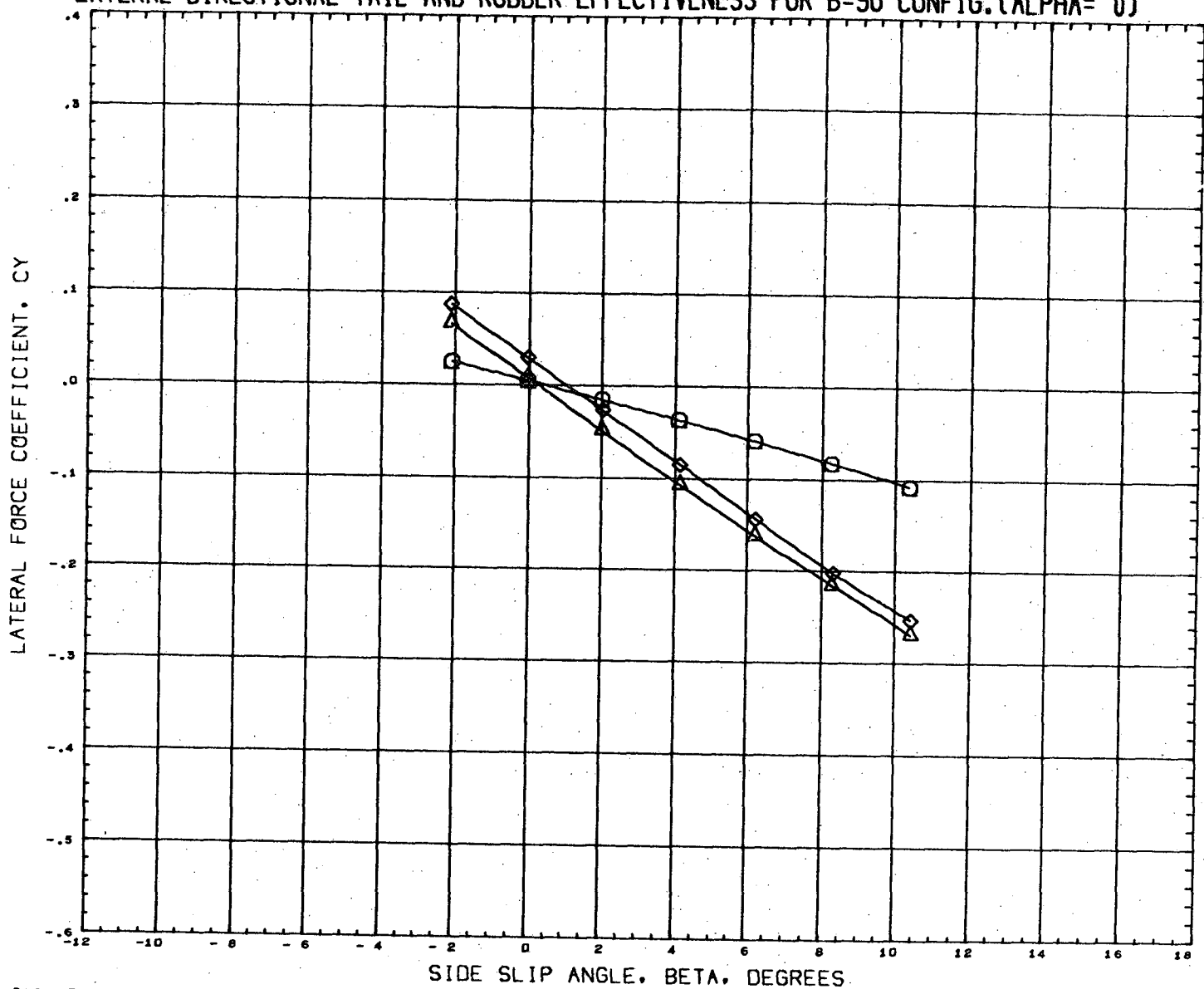
REFERENCE FILE CONVAIR TN-71-AE11

MSFC TWT-493 GD/C B25W19C8

ALPHA=30 C=0 R=0 (A350CA) 04 AUG 71

PAGE 211

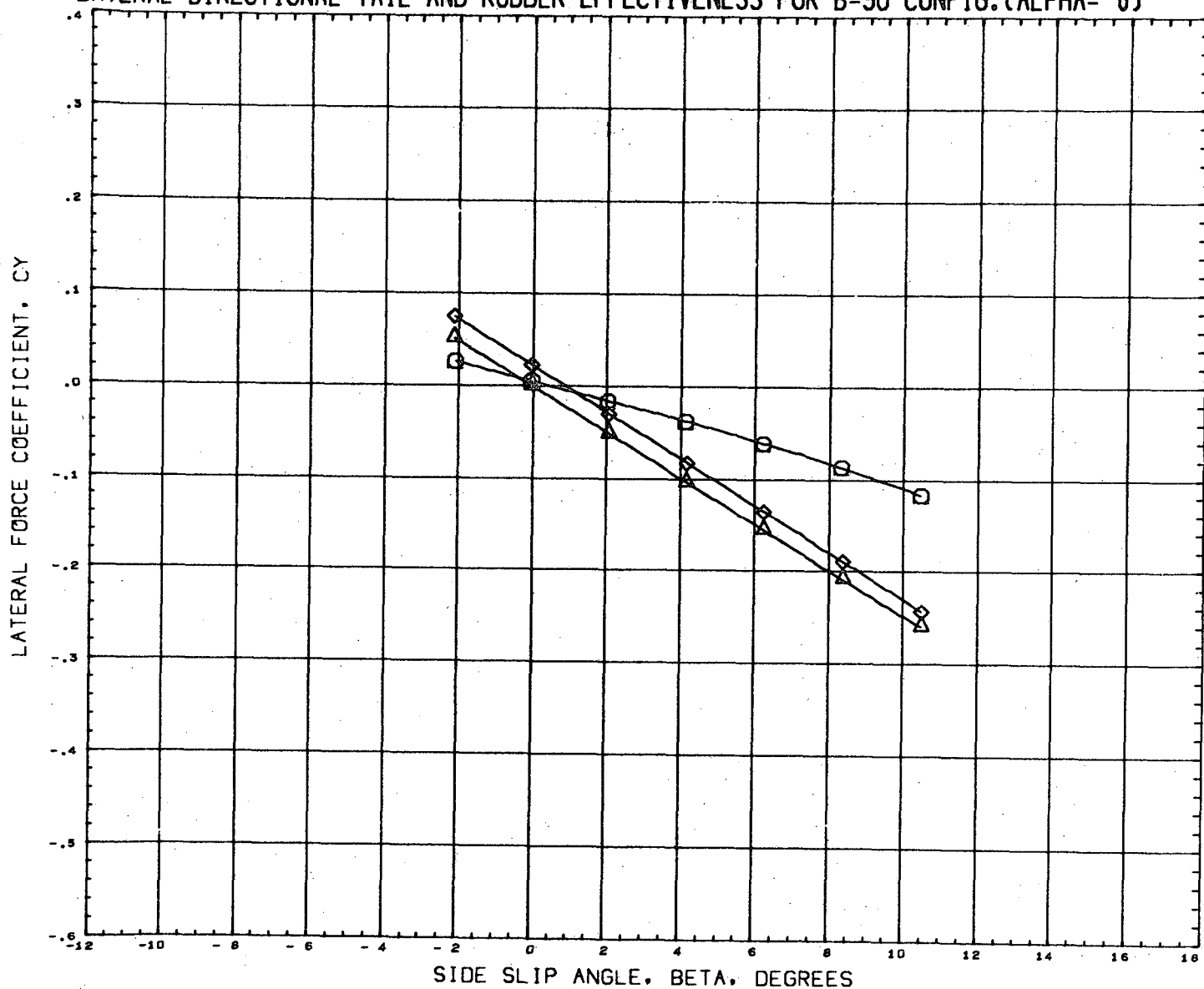
LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL		CONFIGURATION DESCRIPTION		FREE BODY ANGLE DEFLECTION DEGREES				REFERENCE INFORMATION					
(A350DA)	○	MSFC	TWT-493 GD/C	B25W19C8	ALPHA=0	C=0R=0F	0.000	0.000	0.000	0.000	SREF	14.9040	SQ. IN.
(B35TDA)	△	MSFC	TWT-493 GD/C	B25W19C8V10	ALPHA=0	C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120	IN.
(A35RDB)	◇	MSFC	TWT-493 GD/C	B25W19C8V10	ALPHA=0	C=0 R=10	0.000	0.000	0.000	10.000	BREF	6.0180	IN.
											XMRP	7.2990	IN.
											YMRP	0.0000	IN.
											ZMRP	0.0000	IN.
											SCALE	0.0035	
MACH		1.004											

MACH 1.004

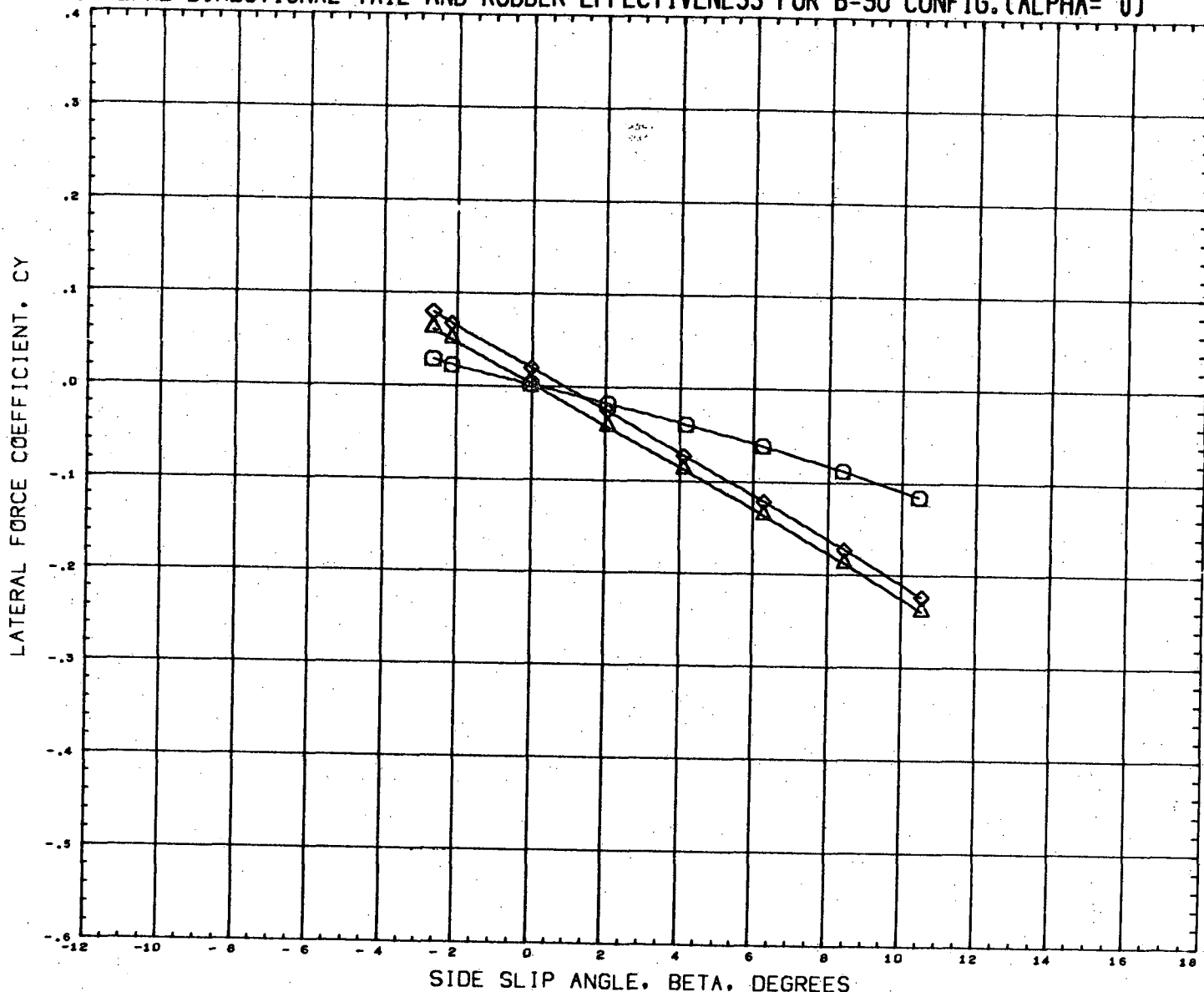
LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(A350DA)	MSFC TWT-493 GD/C B25W19C8	ALPHA=0 C=DR=0F	0.000	0.000	0.000	SREF 14.9040 SQ.IN.
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=0 C=0 R=0	0.000	0.000	0.000	LREF 3.0120 IN.
(A35RDB)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=0 C=0 R=10	0.000	0.000	10.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.196

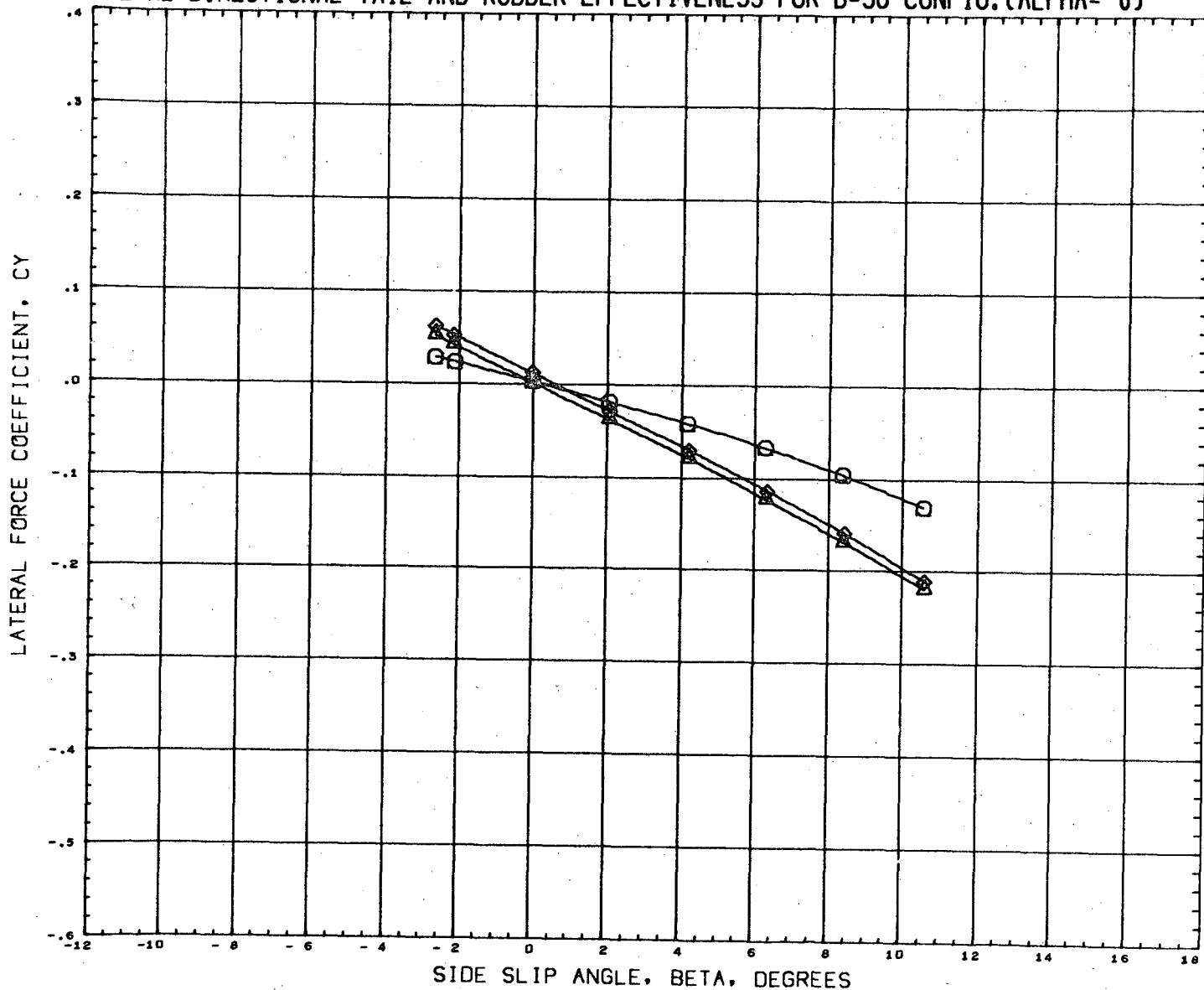
LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL		CONFIGURATION DESCRIPTION				ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION				
(A350DA)	Q	MSFC	TWT-493	GD/C	B25W19C8	ALPHA=0	C=DR=0F	0.000	0.000	0.000	0.000	SREF	14.9040	SQ. IN.
(B35TDA)	Q	MSFC	TWT-493	GD/C	B25W19C8V10	ALPHA=0	C=D R=0	0.000	0.000	0.000	0.000	LREF	3.0120	IN.
(A35RDB)	D	MSFC	TWT-493	GD/C	B25W19C8V10	ALPHA=0	C=D R=10	0.000	0.000	0.000	10.000	BREF	6.0180	IN.
												XMRP	7.2990	IN.
												YMRP	0.0000	IN.
												ZMRP	0.0000	IN.
												SCALE	0.0035	
MACH		1.466												

MACH 1.466

LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG.(ALPHA= 0)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350DA) MSFC TWT-493 GD/C B25W19C8
 (B35TDA) MSFC TWT-493 GD/C B25W19C8V10
 (A35RDB) MSFC TWT-493 GD/C B25W19C8V10

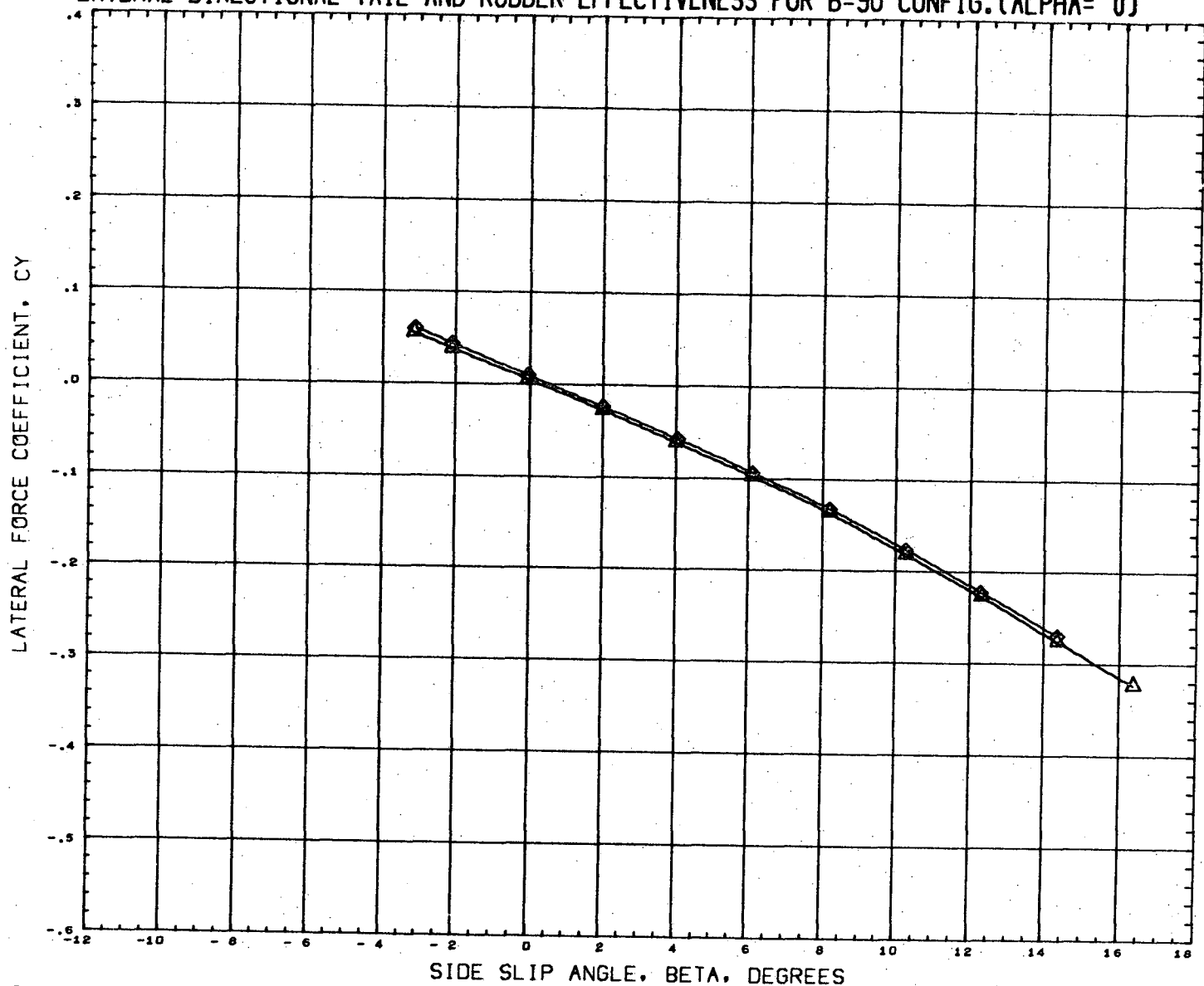
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 ALPHA=0 C=D R=D
 ALPHA=0 C=D R=10

ALPHA ELEVON CANARD RUDDER
 0.000 0.000 0.000 0.000
 0.000 0.000 0.000 0.000
 0.000 0.000 0.000 10.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRF 7.2990 IN.
 YMRF 0.0000 IN.
 ZMRF 0.0000 IN.
 SCALE 0.0035

MACH 1.950

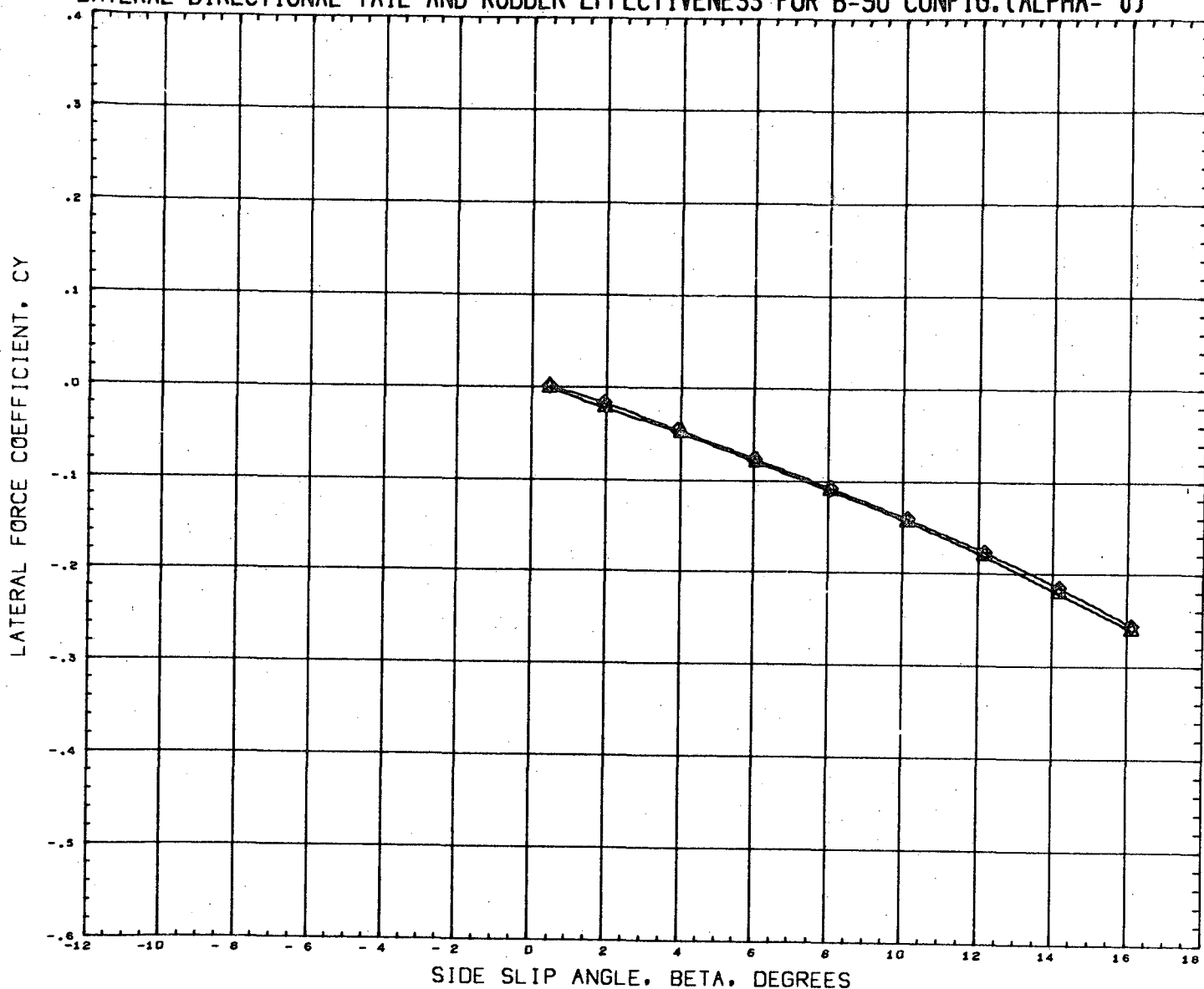
LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(A350DA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(A35RDB)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=D R=10	0.000	0.000	0.000	10.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 2.990

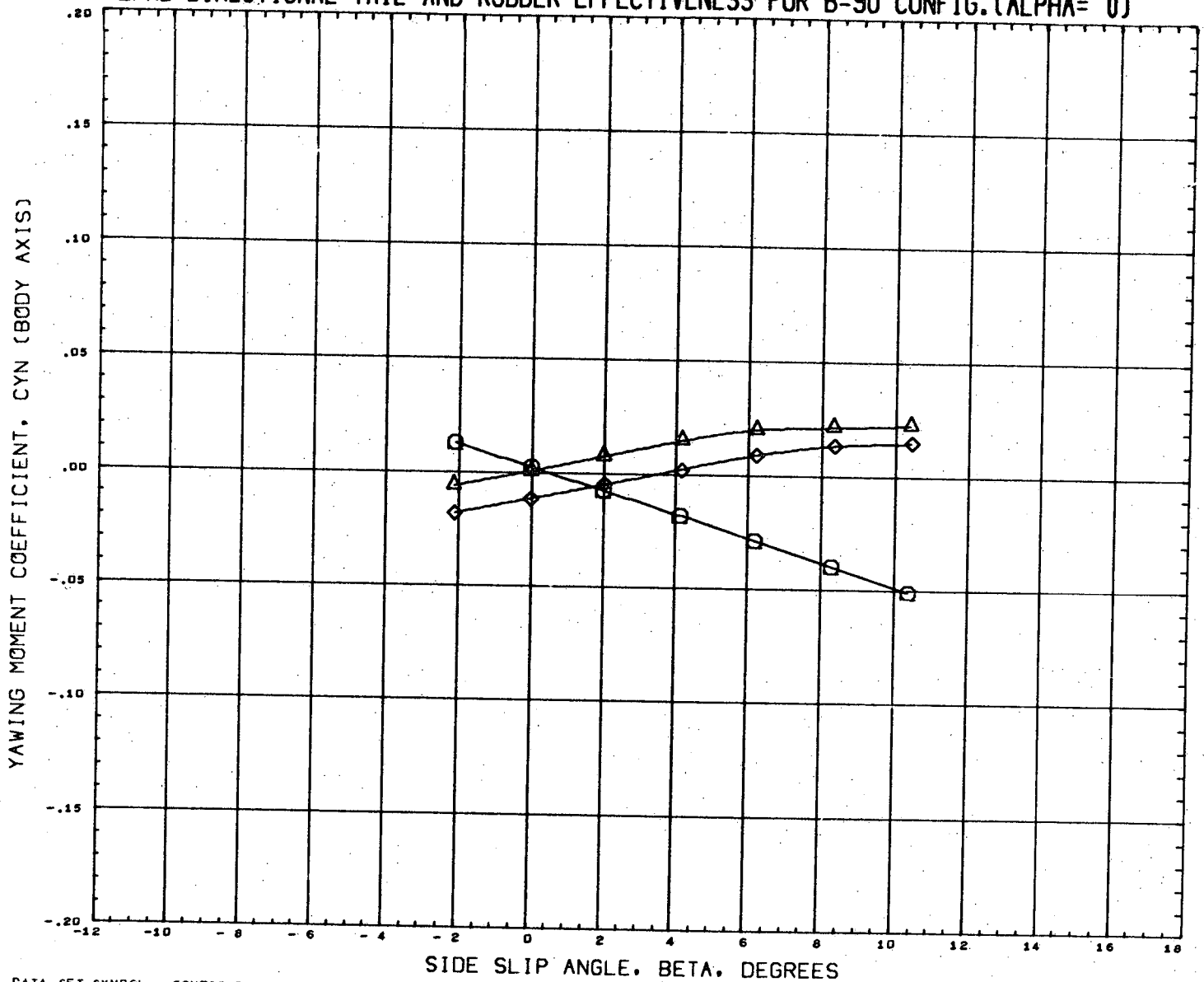
LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)






DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(A350DA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(B351DA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(A35RDB)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=10	0.000	0.000	0.000	10.000	BREF	6.0180 IN.
						XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 4.959

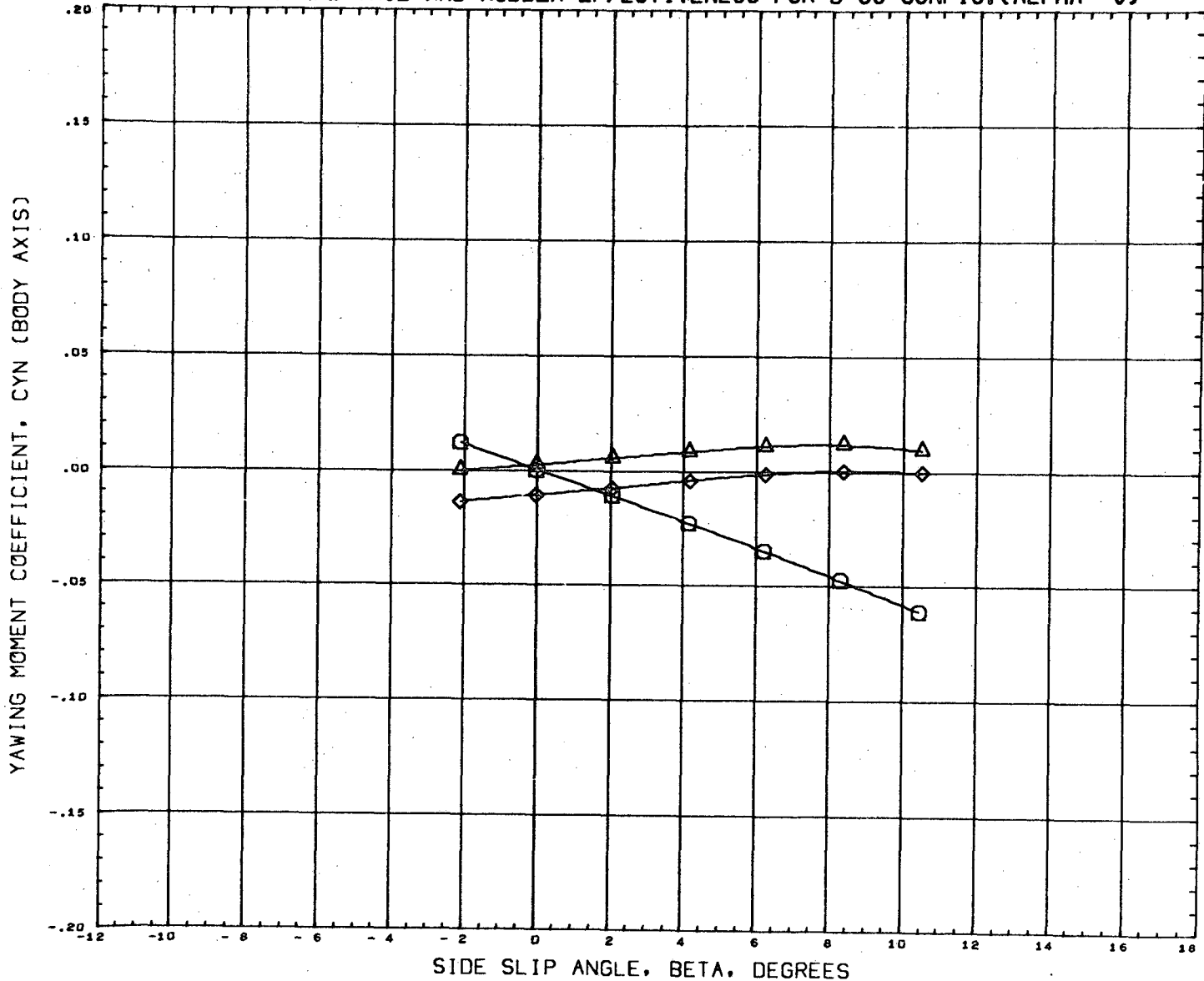
LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL		CONFIGURATION DESCRIPTION				ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(A35ODA)		MSFC TWT-493	GD/C	B25W19C8	ALPHA=0	C=DR=0F	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(B35TDA)		MSFC TWT-493	GD/C	B25W19C8V10	ALPHA=0	C=U R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(A35RDB)		MSFC TWT-493	GD/C	B25W19C8V10	ALPHA=0	C=D R=10	0.000	0.000	0.000	10.000	BREF 6.0180 IN.
											XMRP 7.2990 IN.
											YMRP 0.0000 IN.
											ZMRP 0.0000 IN.
											SCALE 0.0035
MACH		1.004									

MACH 1.004

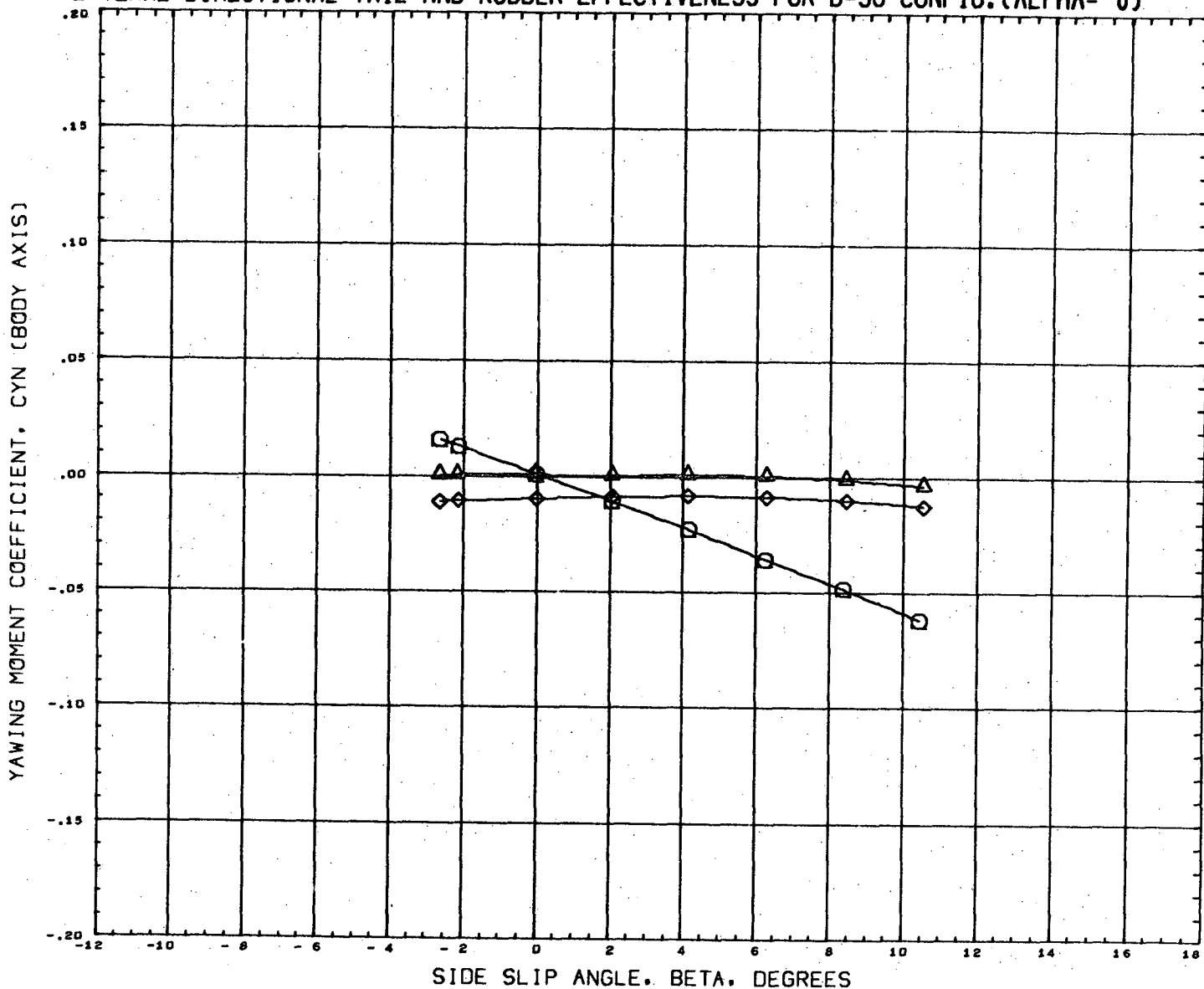
LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG.(ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(A350DA)	MSFC TWT-493 GD/C B25W19C8	ALPHA=0	C=DR=DF	0.000	0.000	0.000	SREF 14.9040 SQ.IN.
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=0	C=D R=0	0.000	0.000	0.000	LREF 3.0120 IN.
(A35RDB)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=0	C=D R=10	0.000	0.000	10.000	BREF 6.0180 IN.
							XMRP 7.2990 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0035

MACH 1.196

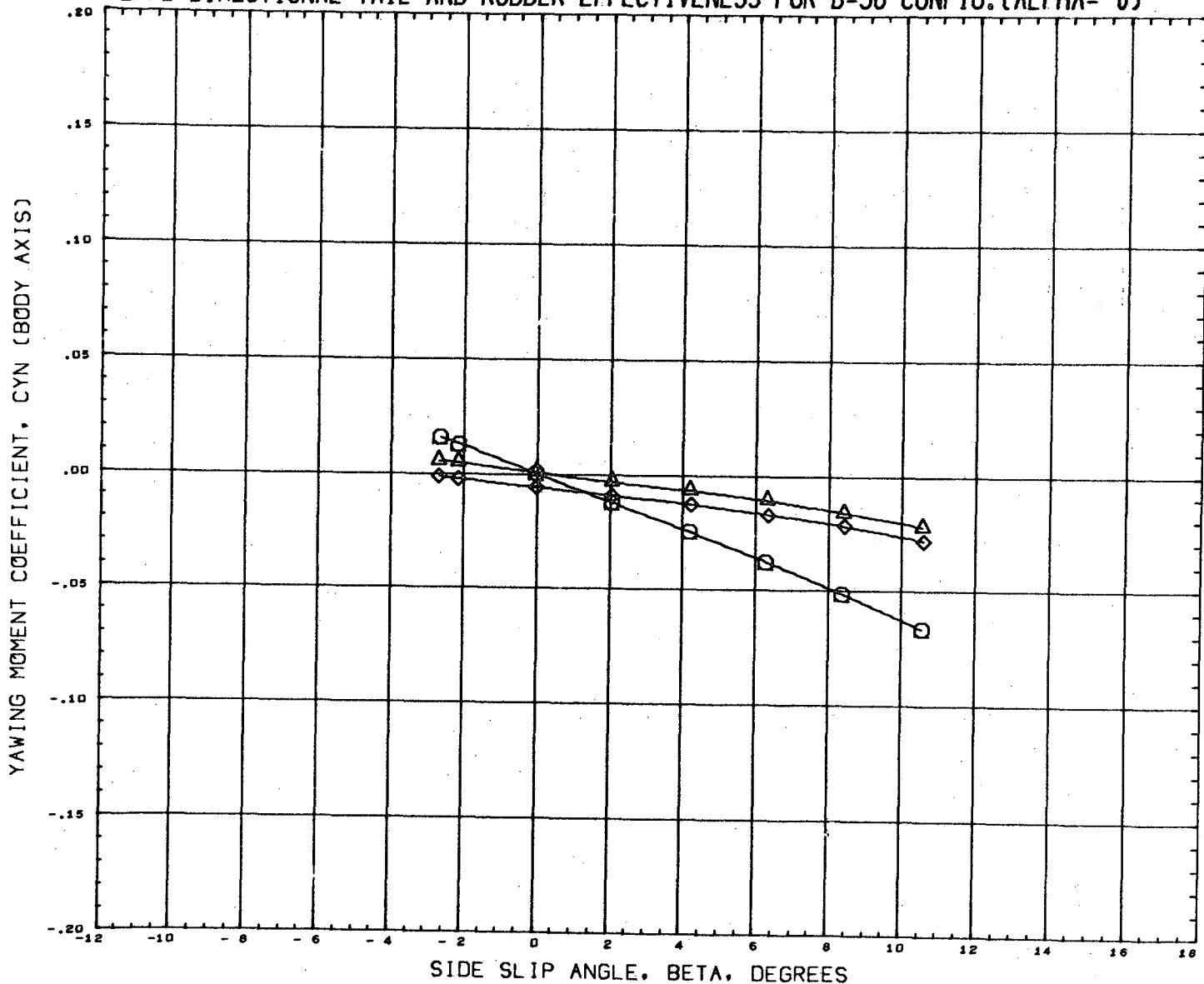
LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(A350DA)	○	MSFC TWT-493 GD/C B25W19C8	ALPHA=0	C=0R=0F	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(B35TDA)	△	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=0	C=0 R=0	0.000	0.000	0.000	LREF 3.0120 IN.
(A35RDB)	◇	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=0	C=0 R=10	0.000	0.000	10.000	BREF 6.0180 IN.
								XMRF 7.2990 IN.
								YMRF 0.0000 IN.
								ZMRF 0.0000 IN.
								SCALE 0.0035

MACH 1.466

LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

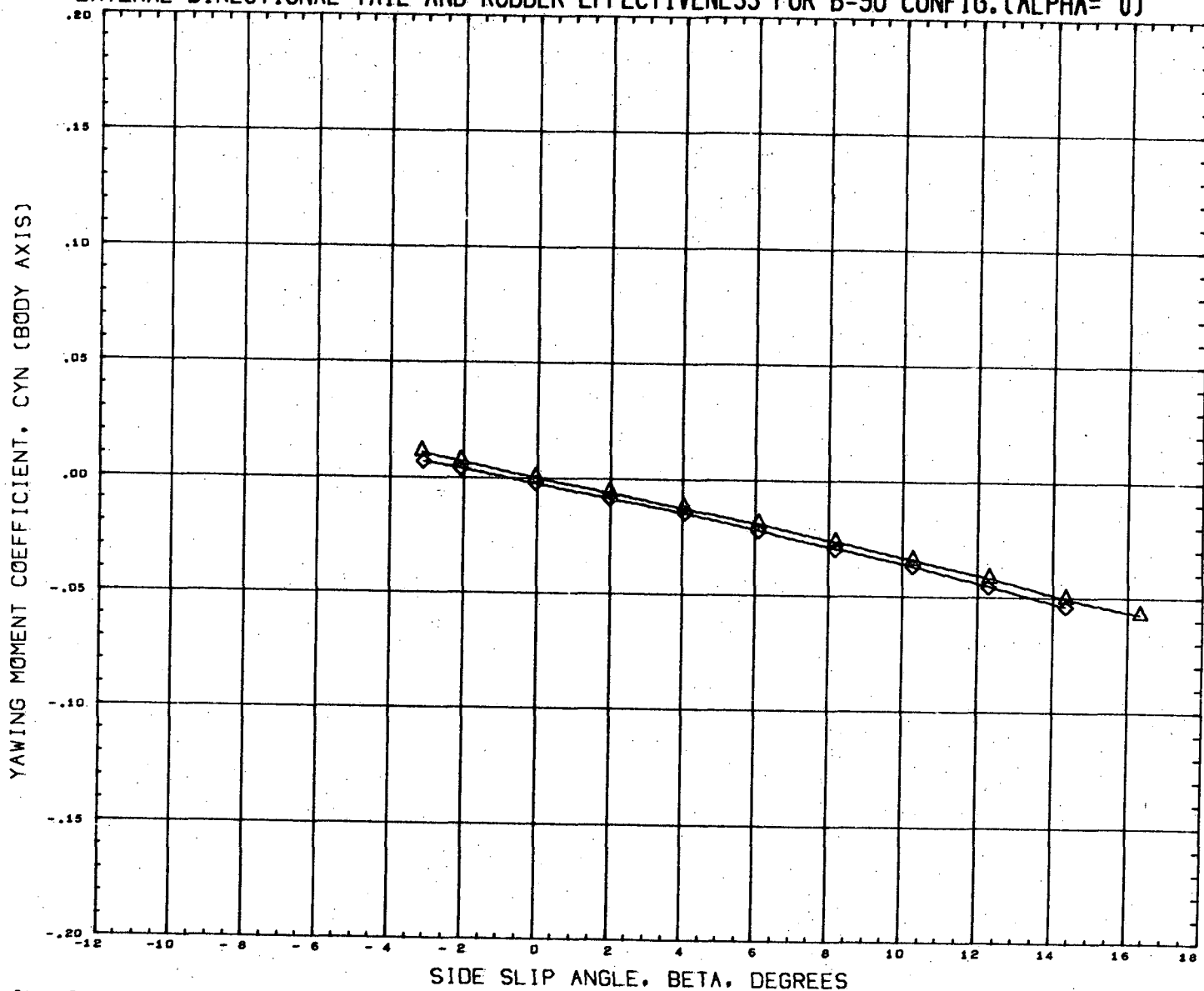
(A350DA) MSFC TWT-493 GD/C B25W19C8 ALPHA=0 C=DR=DF
 (B357DA) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=D R=0
 (A359DB) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=D R=10

ALPHA	ELEVON	CANARD	RUDDER
0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000
0.000	0.000	0.000	10.000

REFERENCE INFORMATION		
SREF	14.9040	SQ.IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

MACH 1.950

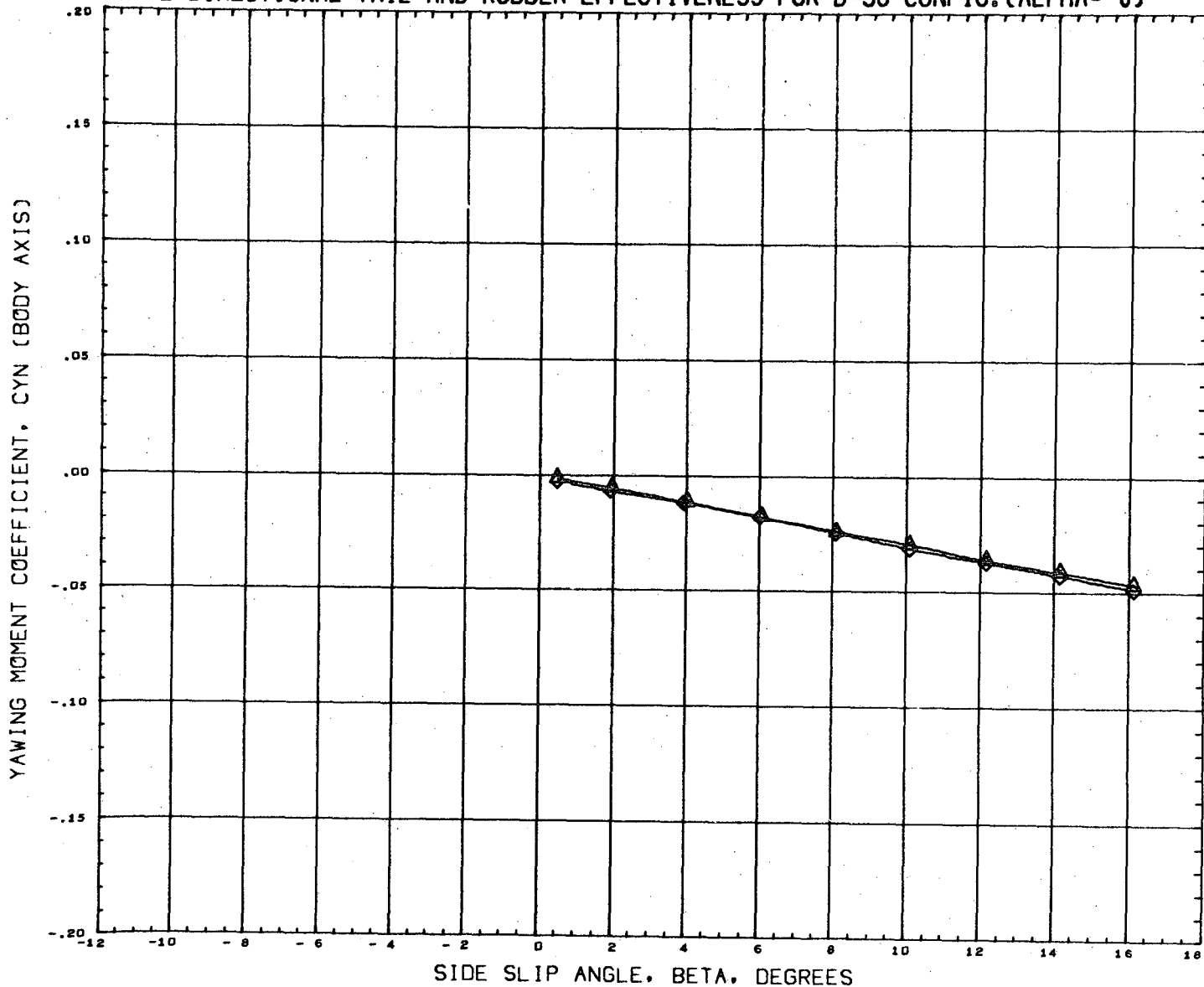
LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(A350DA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(A35RDB)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=10	0.000	0.000	0.000	10.000	BREF	6.0180 IN.
						XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 2.990

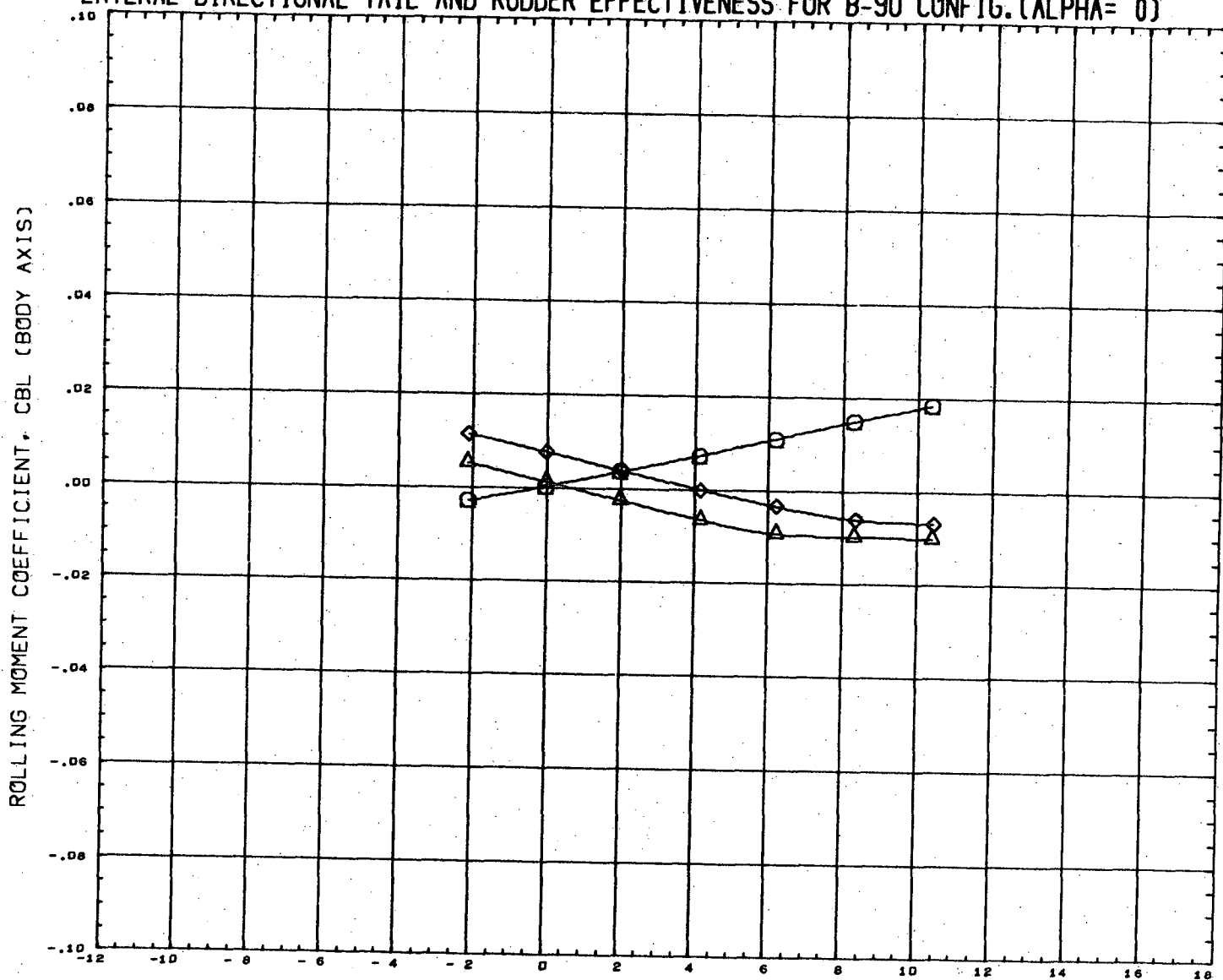
LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION		
(A350DA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF	14.9040	SQ. IN.
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120	IN.
(A35RDB)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=10	0.000	0.000	0.000	10.000	BREF	6.0100	IN.
						XMRP	7.2990	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0035	

MACH 4.959

LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350DA) MSFC TWT-493 GD/C B25W19C8 ALPHA=0 C=DR=DF

(B35TCA) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=D R=0

(A35RDB) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=D R=10

ALPHA ELEVON CANARD RUDDER

0.000 0.000 0.000 0.000

0.000 0.000 0.000 0.000

0.000 0.000 0.000 10.000

REFERENCE INFORMATION

SREF 14.9040 SQ. IN.

LREF 3.0120 IN.

BREF 6.0180 IN.

XMRP 7.2990 IN.

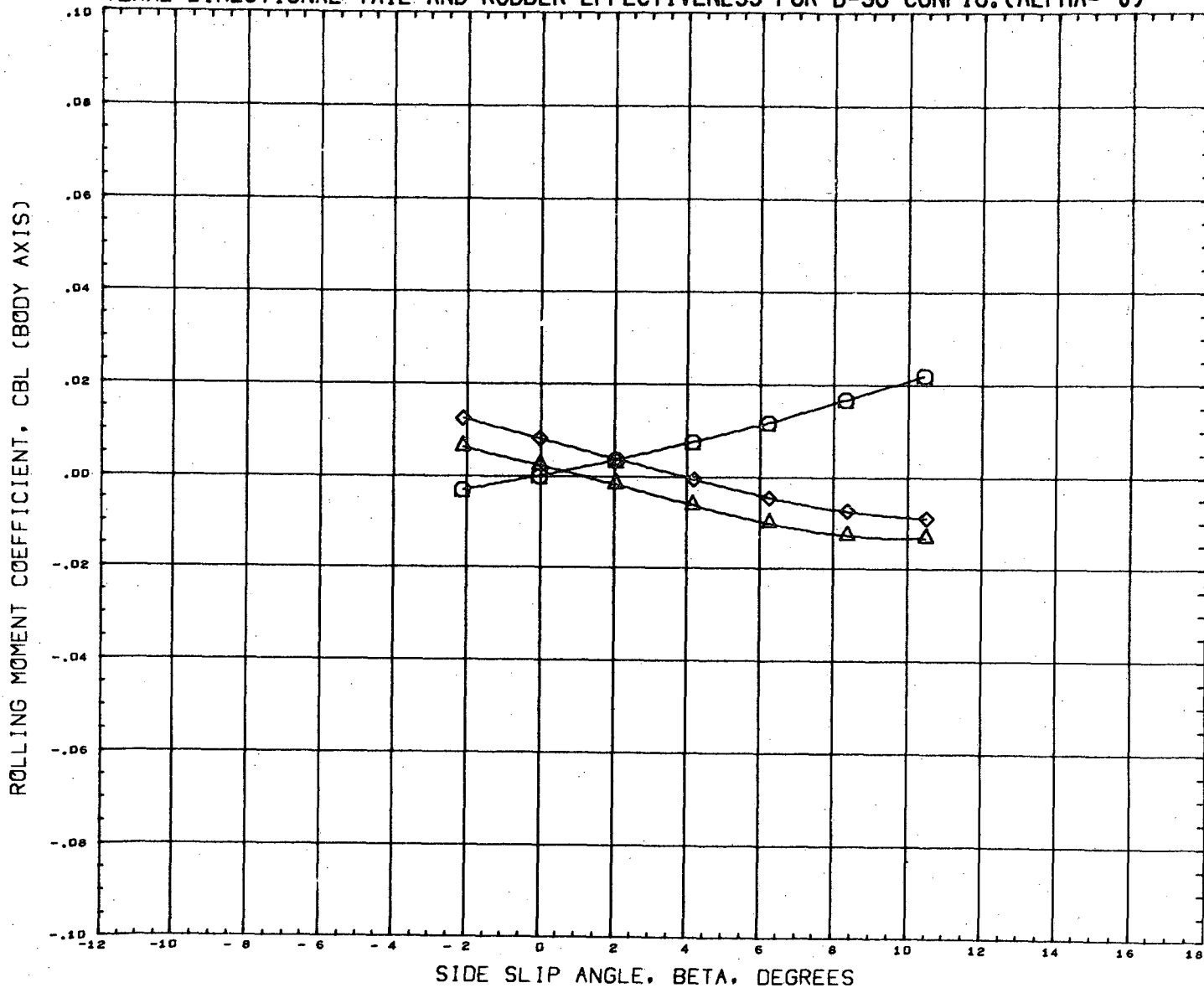
YMRP 0.0000 IN.

ZMRP 0.0000 IN.

SCALE 0.0035

MACH 1.004

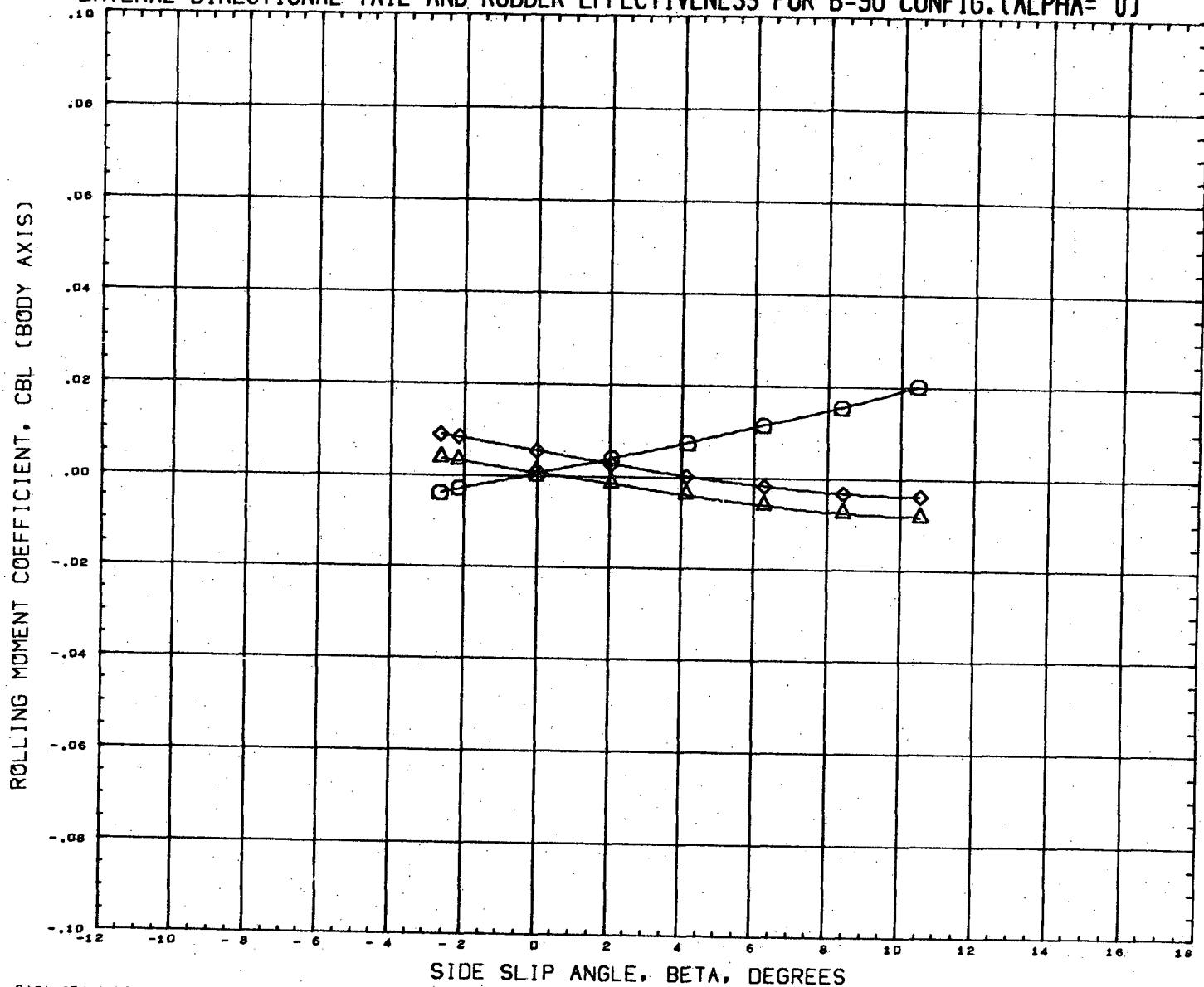
LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(A350DA)	MSFC TWT-493 GD/C B25W19C8	ALPHA=0 C=0R=0F	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=0 C=0 R=0	0.000	0.000	0.000	LREF	3.0120 IN.
(A35RDB)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=0 C=0 R=10	0.000	0.000	10.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.196

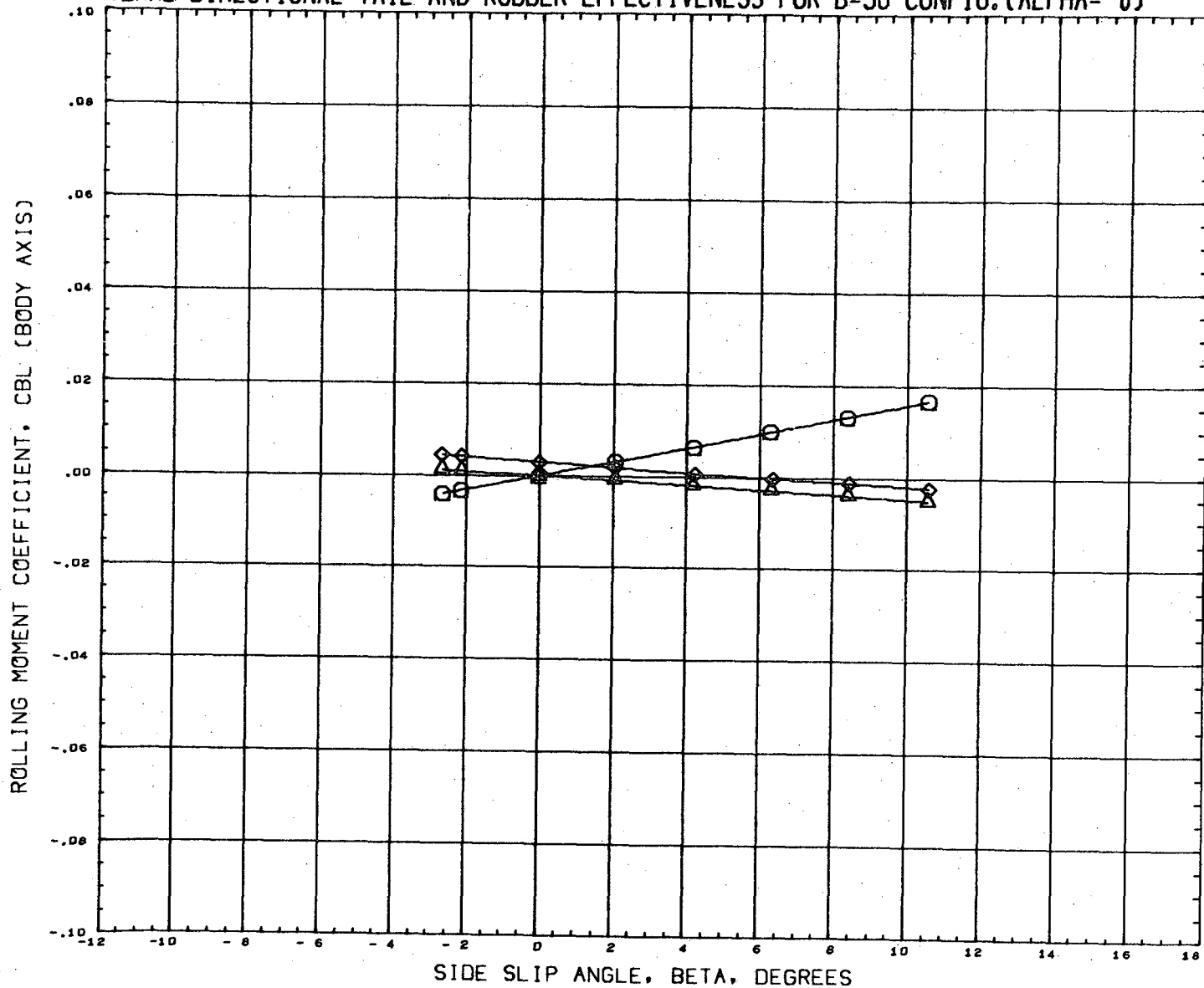
LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL		CONFIGURATION DESCRIPTION				ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION				
(A350DA)	○	MSFC	TWT-493	GD/C	B25W19C8	ALPHA=0	C=DR=DF	0.000	0.000	0.000	0.000	SREF	14.9040	SQ. IN.
(B35TDA)	△	MSFC	TWT-493	GD/C	B25W19C8V10	ALPHA=0	C=D R=0	0.000	0.000	0.000	0.000	LREF	3.0120	IN.
(A35RDB)	◇	MSFC	TWT-493	GD/C	B25W19C8V10	ALPHA=0	C=D R=10	0.000	0.000	0.000	10.000	BREF	6.0180	IN.
												XMRF	7.2990	IN.
												YMRF	0.0000	IN.
												ZMRF	0.0000	IN.
												SCALE	0.0035	
MACH		1.466												

MACH 1.466

LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350DA)	MSFC TWT-493 GD/C B25W19C8	ALPHA=0 C=DR=DF
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=0 C=D R=0
(A35RDB)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=0 C=D R=10

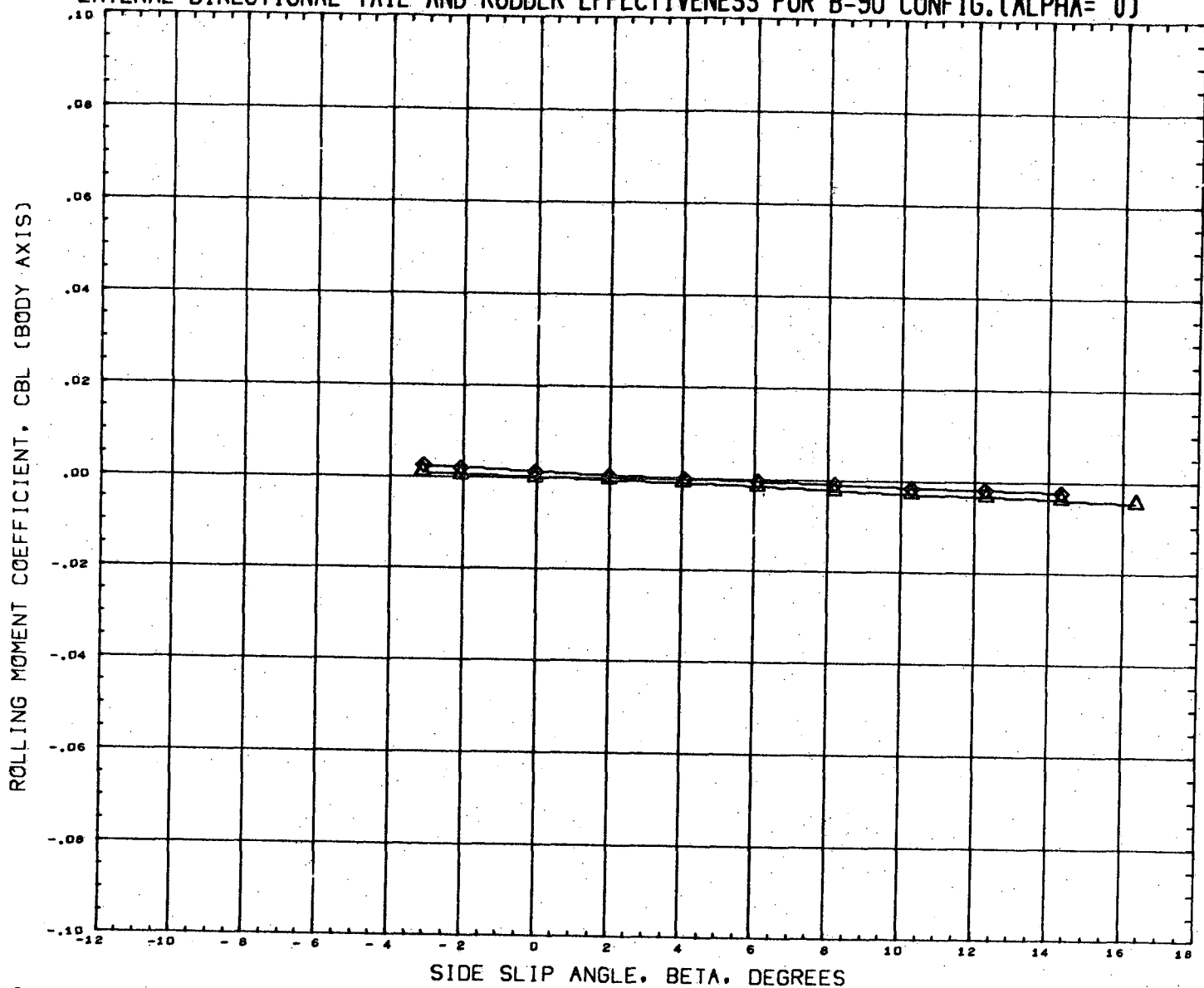
ALPHA	ELEVON	CANARD	RUDDER
0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000
0.000	0.000	0.000	10.000

REFERENCE INFORMATION

SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0160	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

MACH 1.950

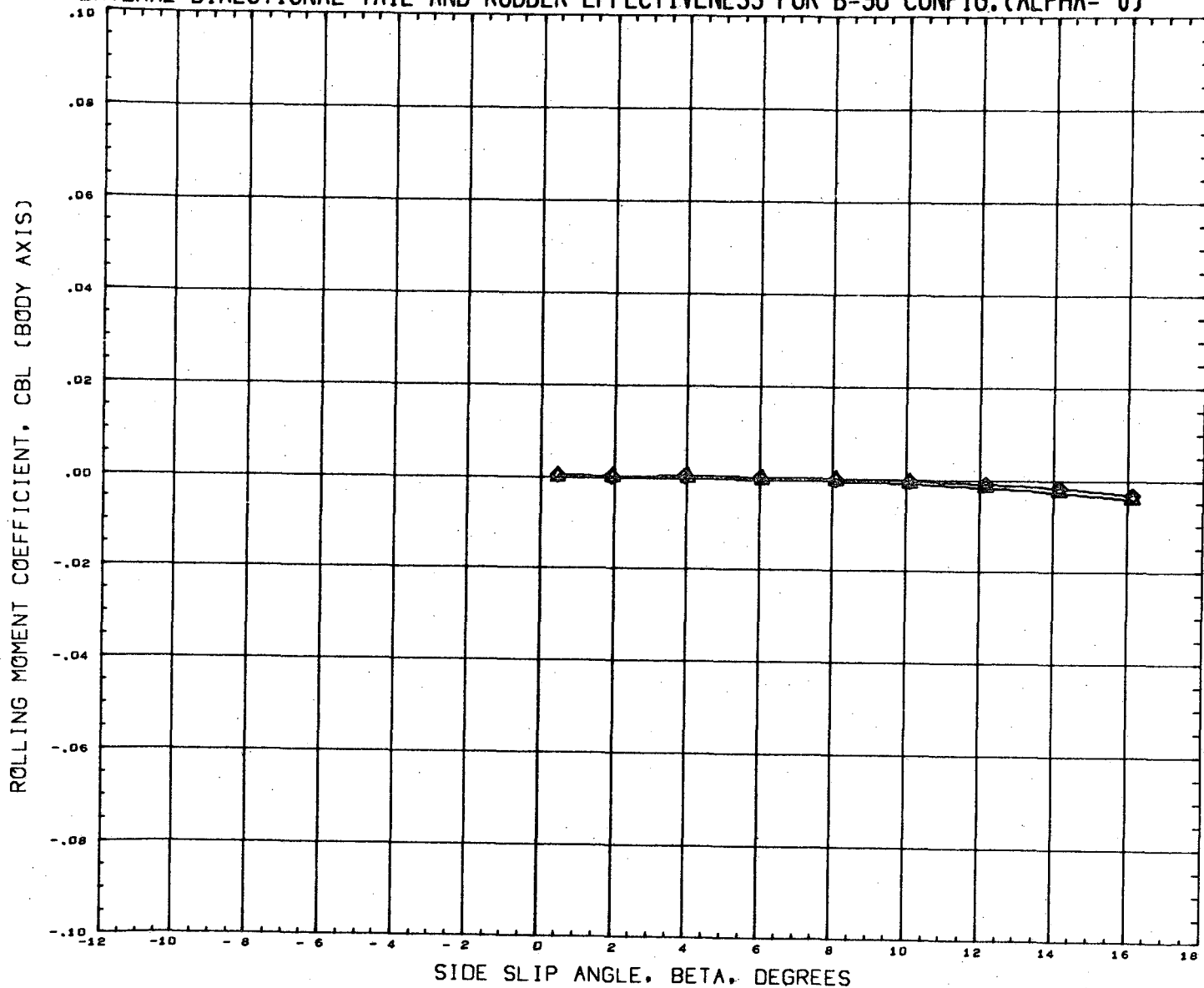
LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(A350DA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(B35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 IN.
(A35RDB)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=10	0.000	0.000	0.000	10.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 2.990

LATERAL-DIRECTIONAL TAIL AND RUDDER EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 0)



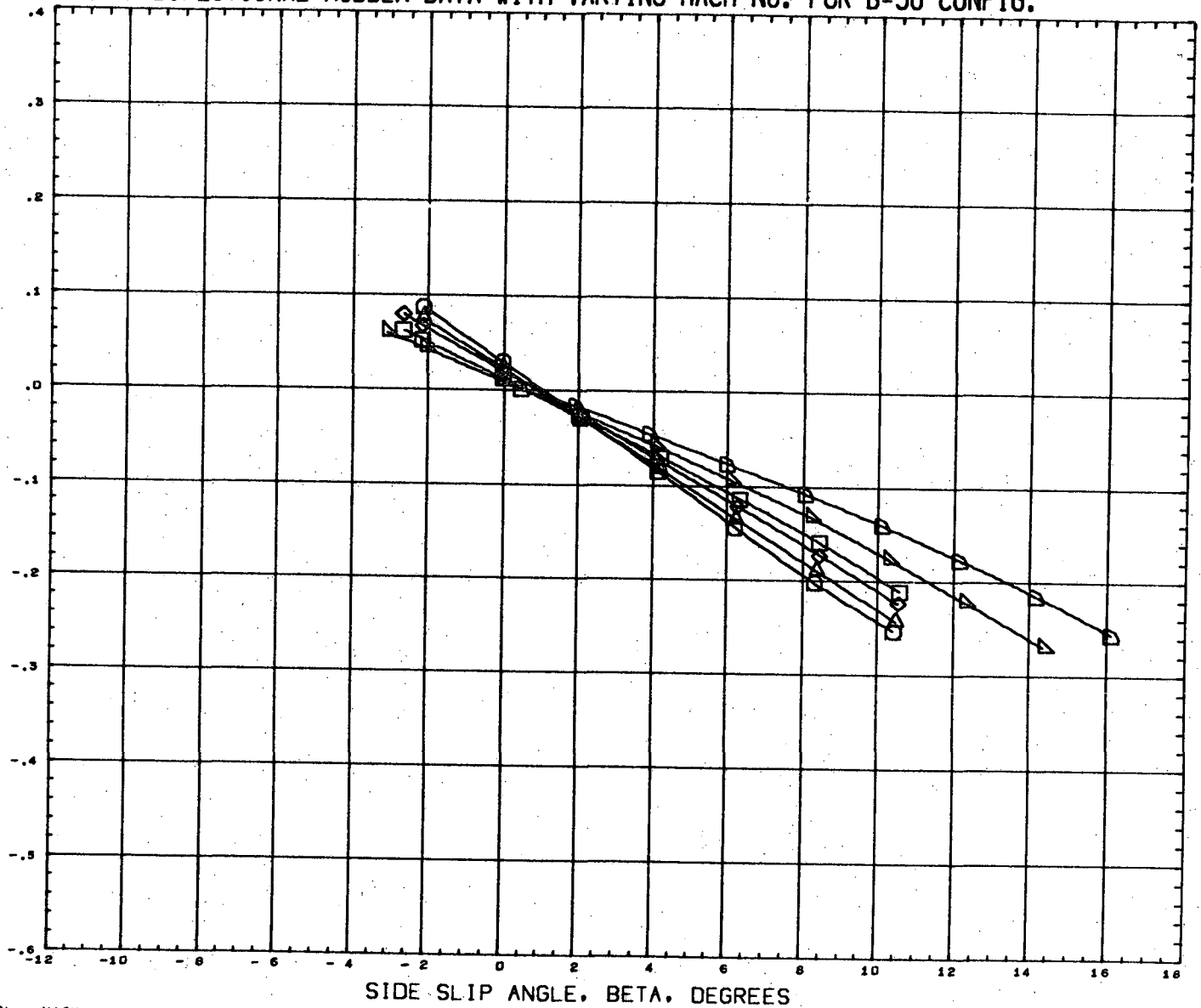
DATA SET SYMBOL CONFIGURATION DESCRIPTION







(A350DA) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (B35TDA) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0
 (A35RDB) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=10

ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
0.000	0.000	0.000	0.000	LREF 3.0120 IN.
0.000	0.000	0.000	10.000	BREF 6.0180 IN.
				XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

MACH 4.959

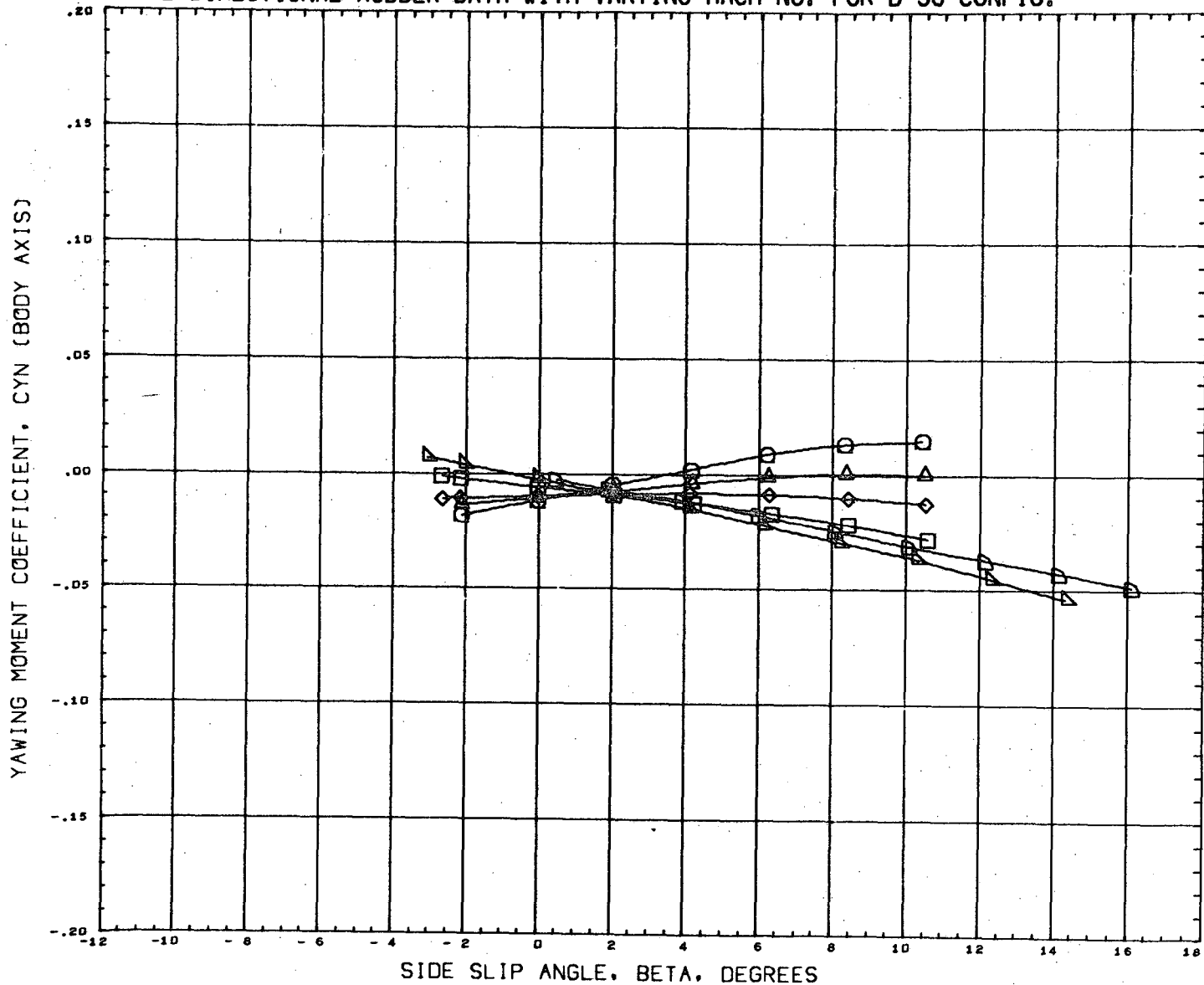
LATERAL FORCE COEFFICIENT, CY



SYMBOL	MACH	PARAMETRIC VALUES		
	0.996	ALPHA	0.000	ELEVON 0.000
	1.199	CANARD	0.000	RUDDER 10.000
	1.462			
	1.948			
	2.990			
	4.959	REFERENCE FILE	CONVAIR TN-71-AE11	

REFERENCE INFORMATION		
SREF	14.9040	SQ.IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

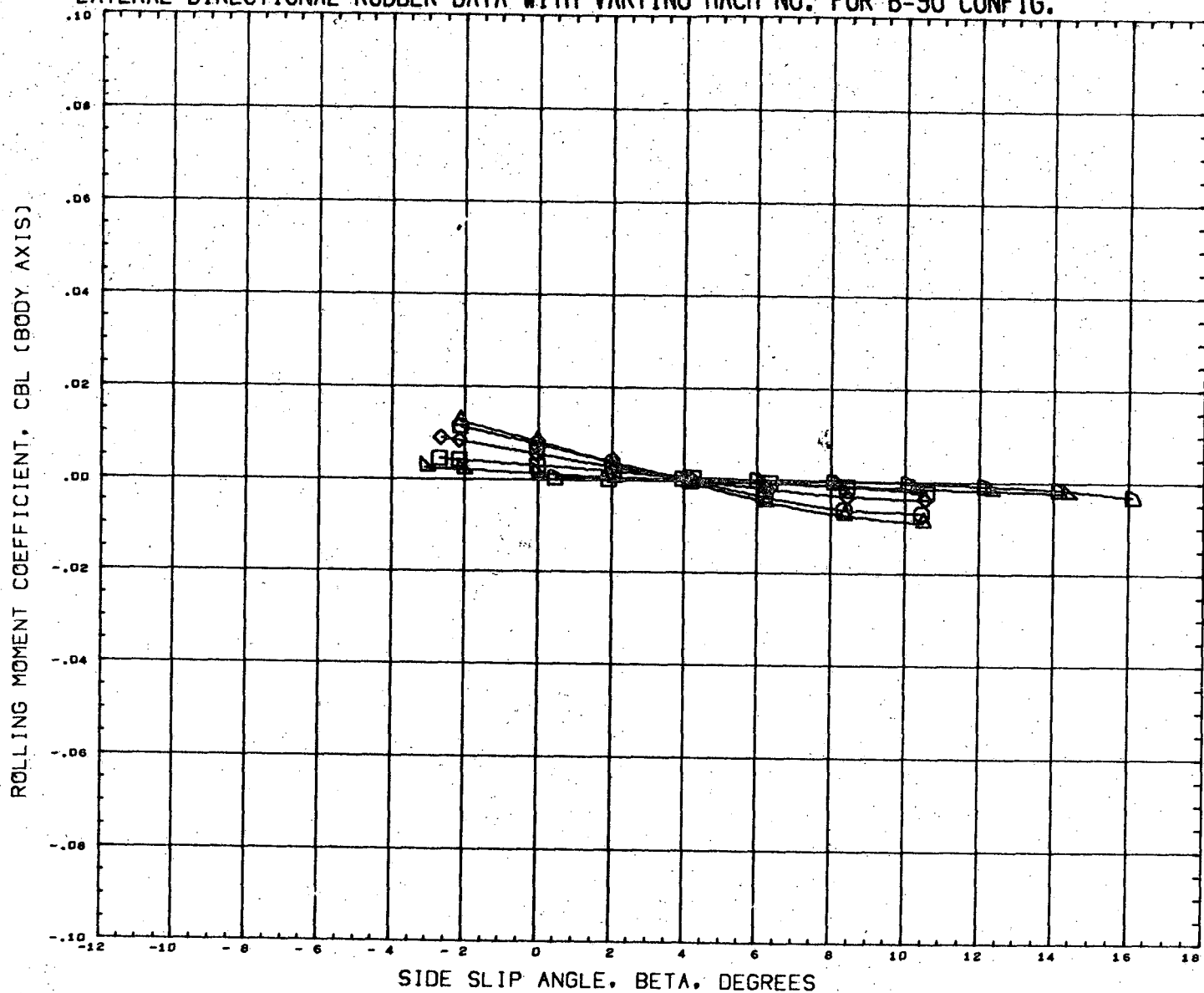
LATERAL-DIRECTIONAL RUDDER DATA WITH VARYING MACH NO. FOR B-9U CONFIG.



SYMBOL	MACH	PARAMETRIC VALUES			
<div> <div>◇</div> <div>□</div> <div>◇</div> <div>◇</div> <div>◇</div> <div>◇</div> </div>	0.996	ALPHA	0.000	ELEVON	0.000
	1.199	CANARD	0.000	RUDDER	10.000
	1.462				
	1.948				
	2.990				
	4.959	REFERENCE FILE	CONVAIR TN-71-AE11		

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

LATERAL-DIRECTIONAL RUDDER DATA WITH VARYING MACH NO. FOR B-9U CONFIG.

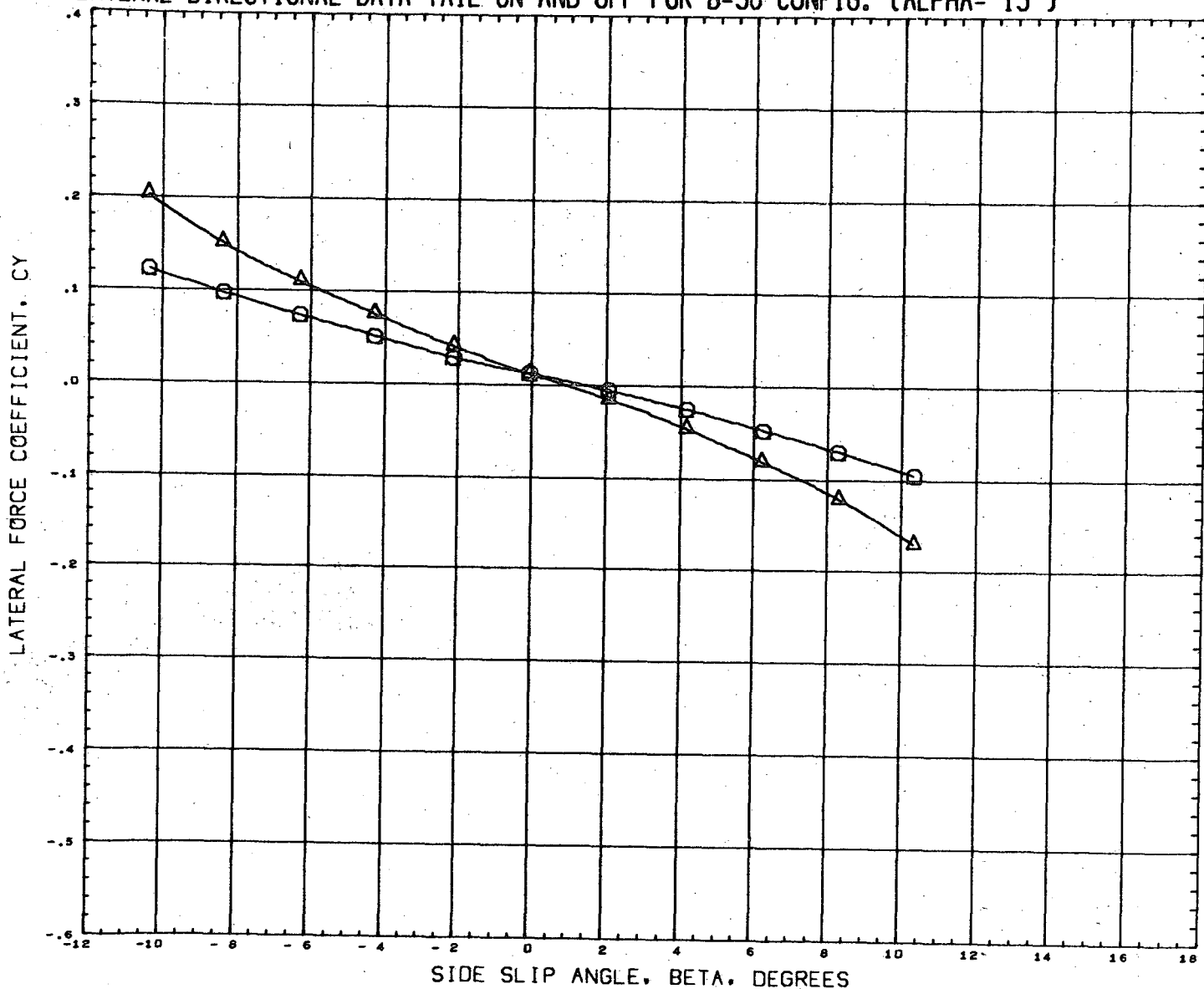


SYMBOL	MACH	PARAMETRIC VALUES
○	0.996	ALPHA 0.000 ELEVON 0.000
□	1.199	CANARD 0.000 RUDDER 10.000
△	1.462	
◇	1.948	
×	2.990	
+	4.959	



REFERENCE FILE CONVAIR TN-71-AE11

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350CC)  MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF
 (A35TCC)  MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D R=D

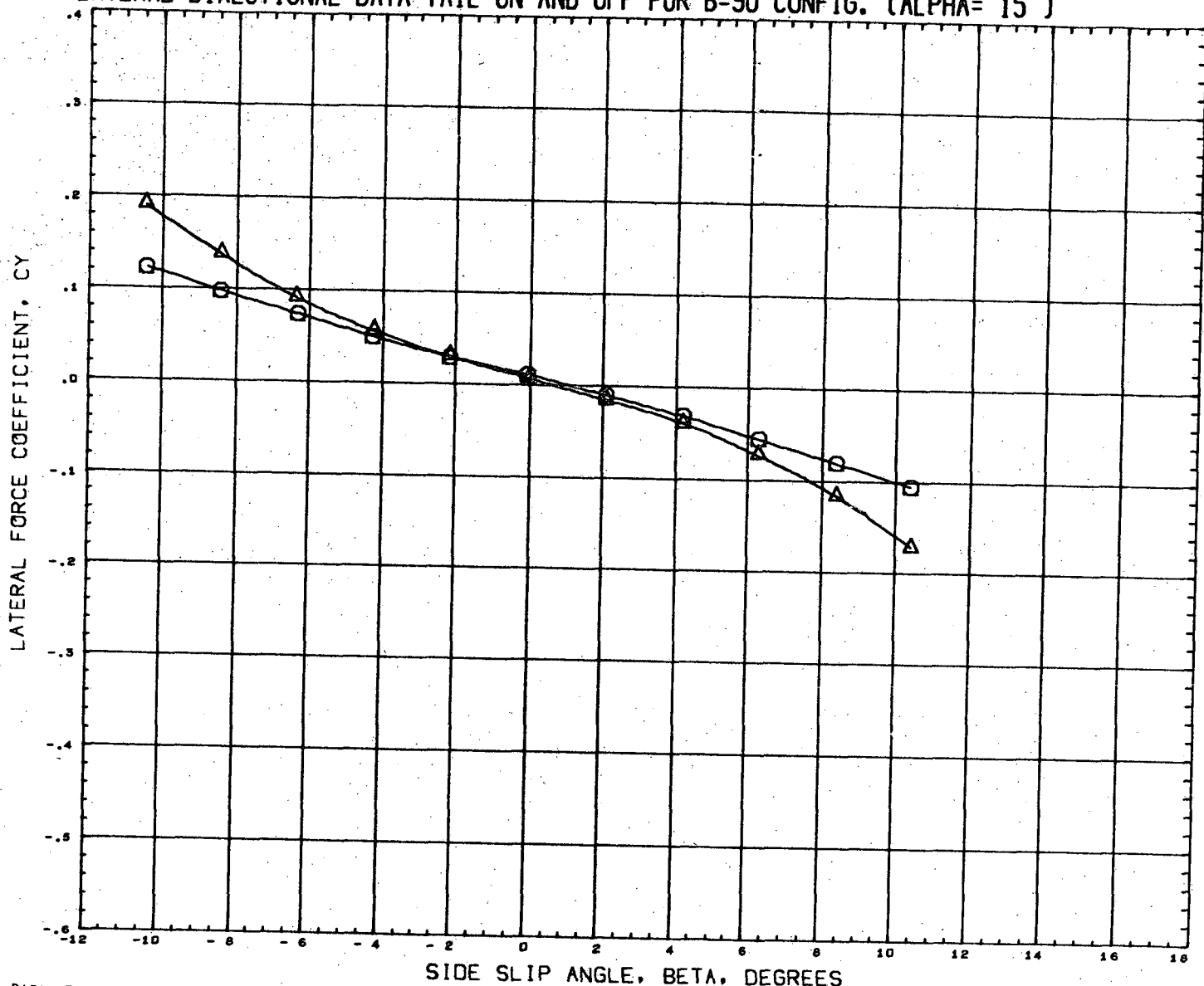
ALPHA	ELEVON	CANARD	RUDDER
15.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000

REFERENCE INFORMATION

SREF	14.9040	Sq. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MACH 0.992

LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350CC) MSFC TWT-493 GD/C B25W19C8

(A35TCC) MSFC TWT-493 GD/C B25W19C8V10

ALPHA=15 C=DR=0F
ALPHA=15 C=D R=0

ALPHA
15.000
15.000

ELEVON
0.000
0.000

CANARD
0.000
0.000

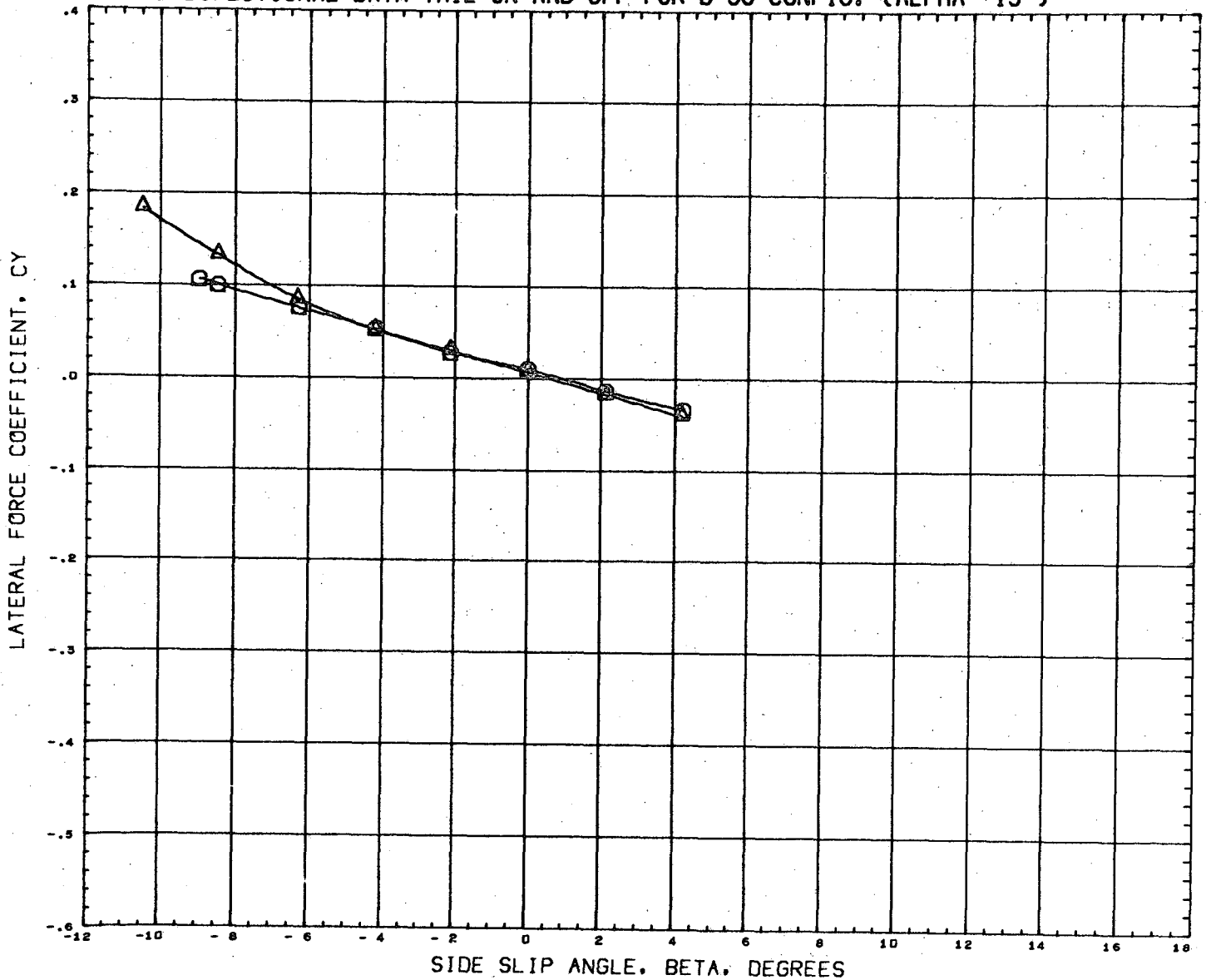
RUDDER
0.000
0.000

REFERENCE INFORMATION

SREF 14.9040 50. IN.
LREF 3.0120 IN.
BREF 6.0180 IN.
XMRP 7.2990 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0035

MACH 1.192

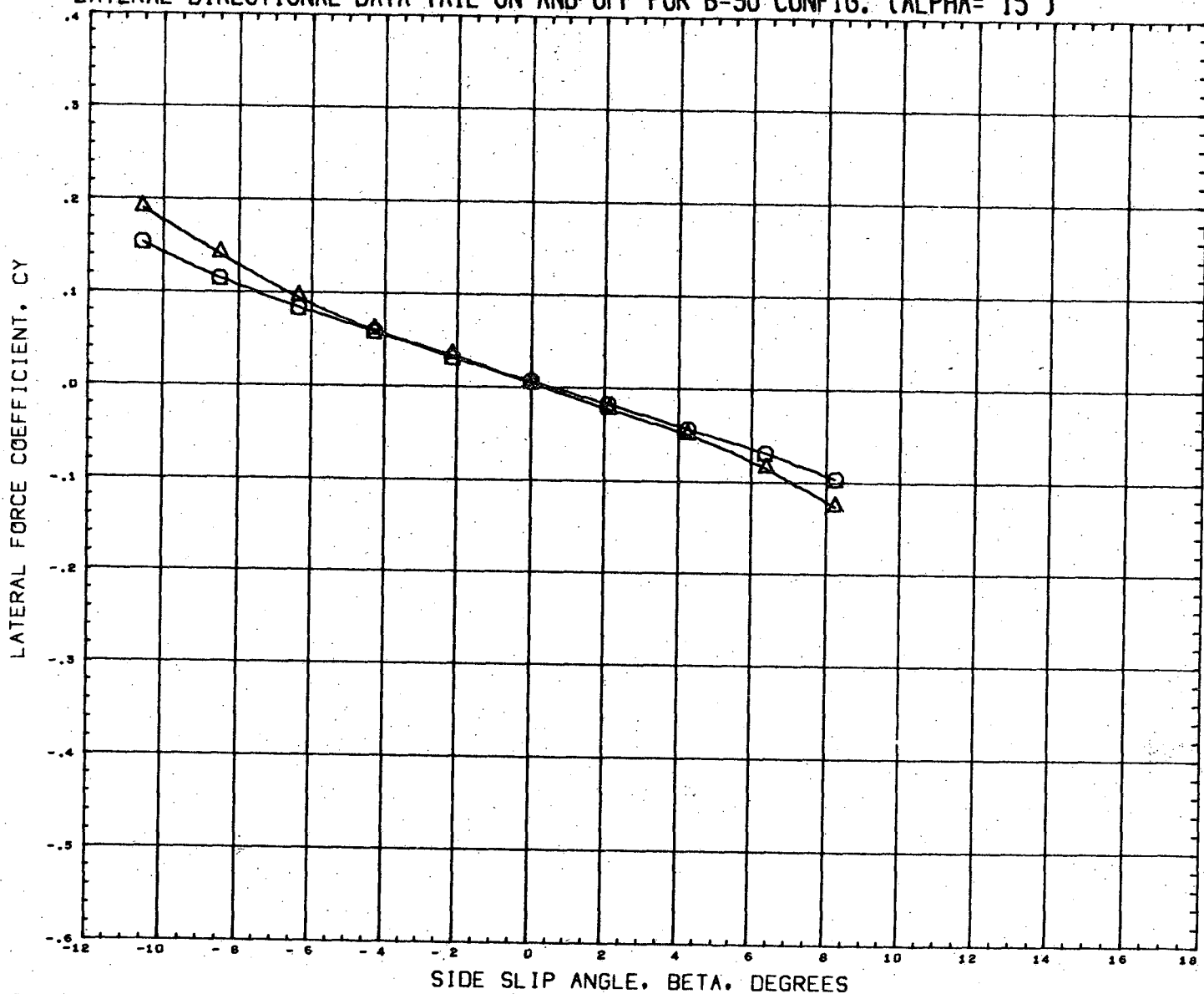
LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(A350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=DF	15.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=15 C=D R=D	15.000	0.000	0.000	0.000	LREF 3.0120 IN.
							BREF 6.0180 IN.
							XMRF 7.2990 IN.
							YMRF 0.0000 IN.
							ZMRF 0.0000 IN.
							SCALE 0.0035

MACH 1.469

LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15°)

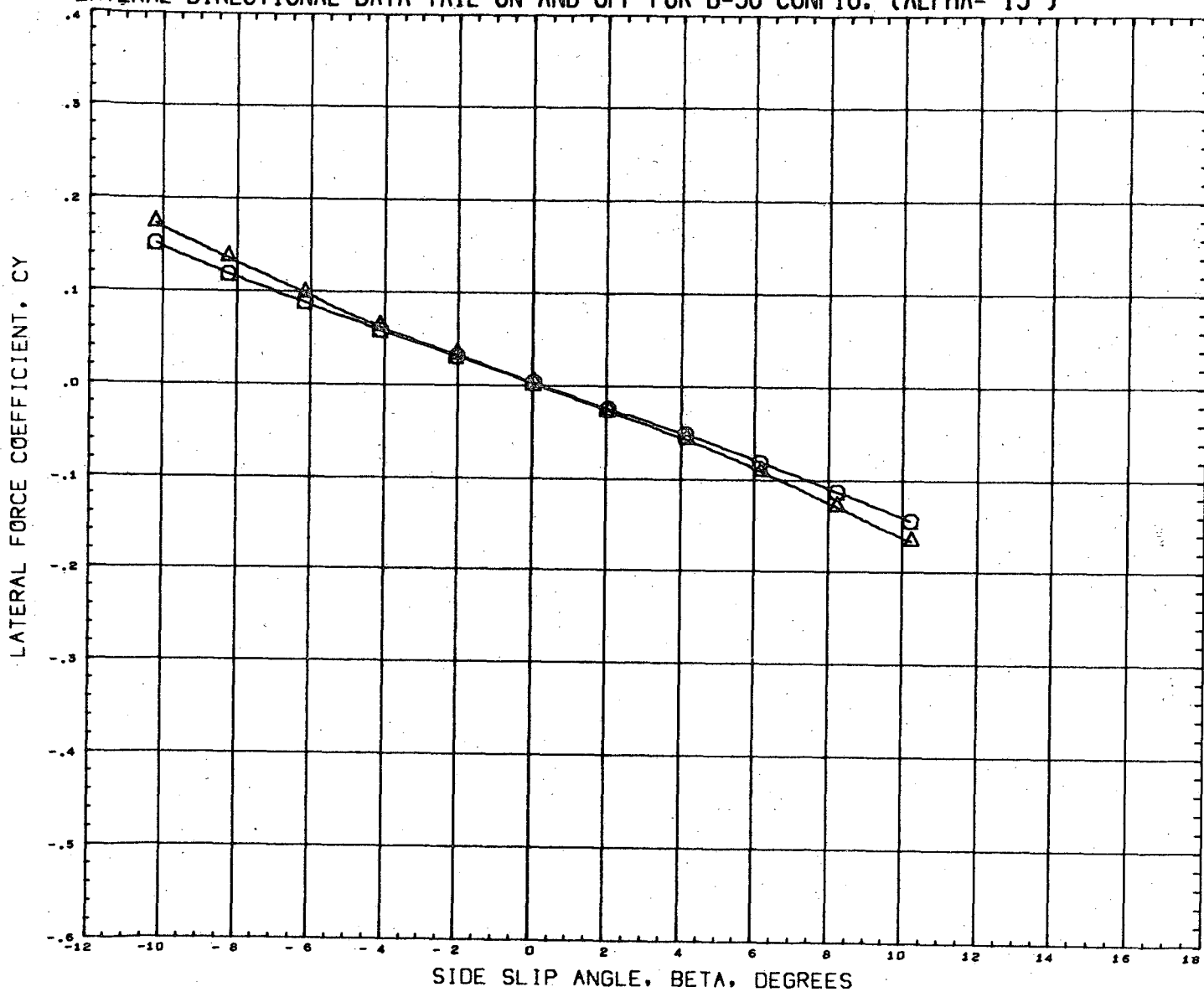


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(A350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=OR=OF	15.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A357CC)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=15 C=O R=O	15.000	0.000	0.000	LREF	3.0120 IN.
						BREF	6.0180 IN.
						XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 1.964

Handwritten signature/initials

LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350CC) MSFC TWT-493 GD/C B25W19C8
(A35TCC) MSFC TWT-493 GD/C B25W19C8V10

ALPHA=15 C=DR=DF
ALPHA=15 C=D R=0

ALPHA

ELEVON

CANARD

RUDDER

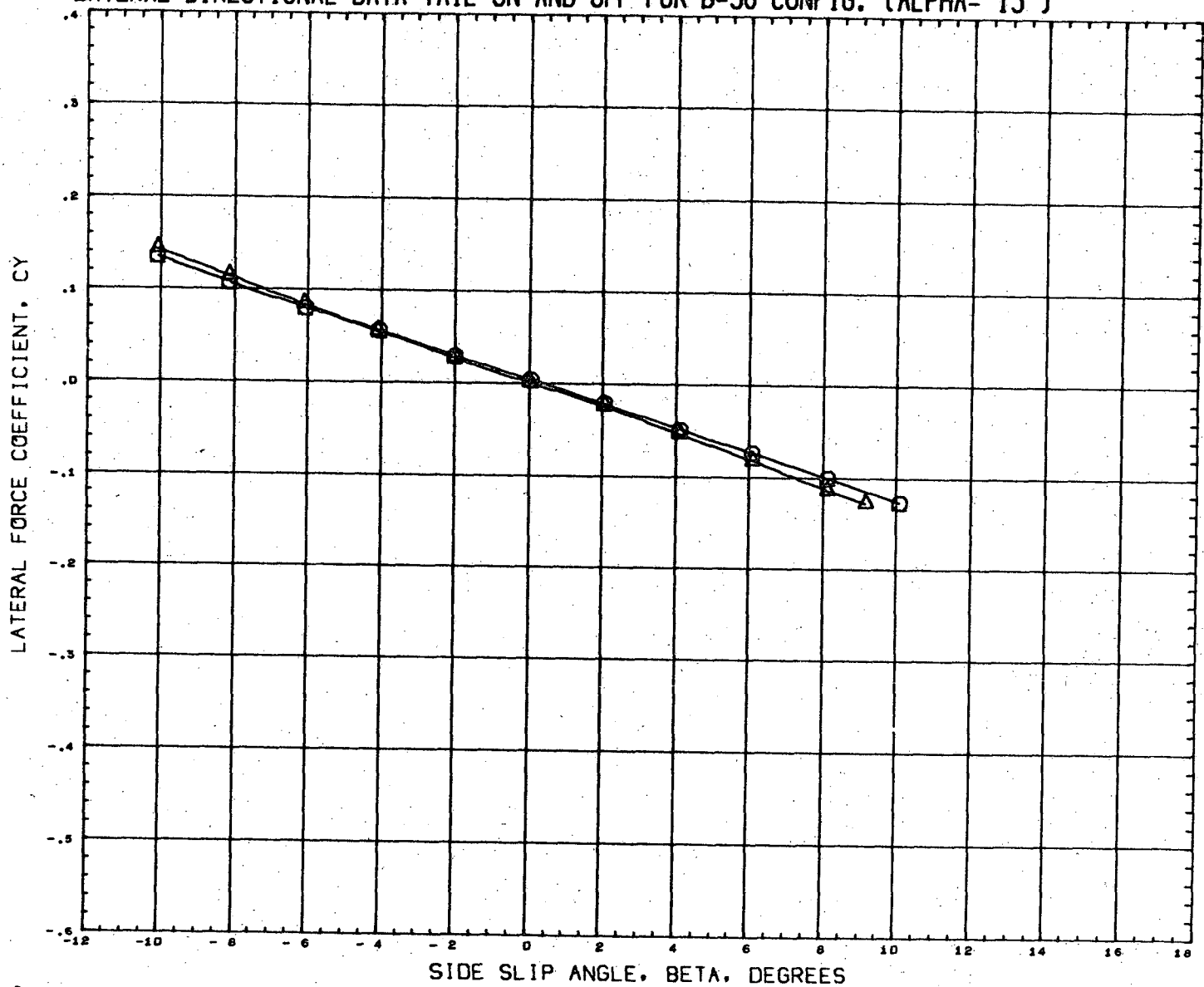
REFERENCE INFORMATION

SREF 14.9040 SQ. IN.
LREF 3.0120 IN.
BREF 6.0180 IN.
XMRP 7.2990 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0035

MACH

2.995

LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350CC)
(A35TCC)



MSFC TWT-493 GD/C B25W19C8
MSFC TWT-493 GD/C B25W19C8V10

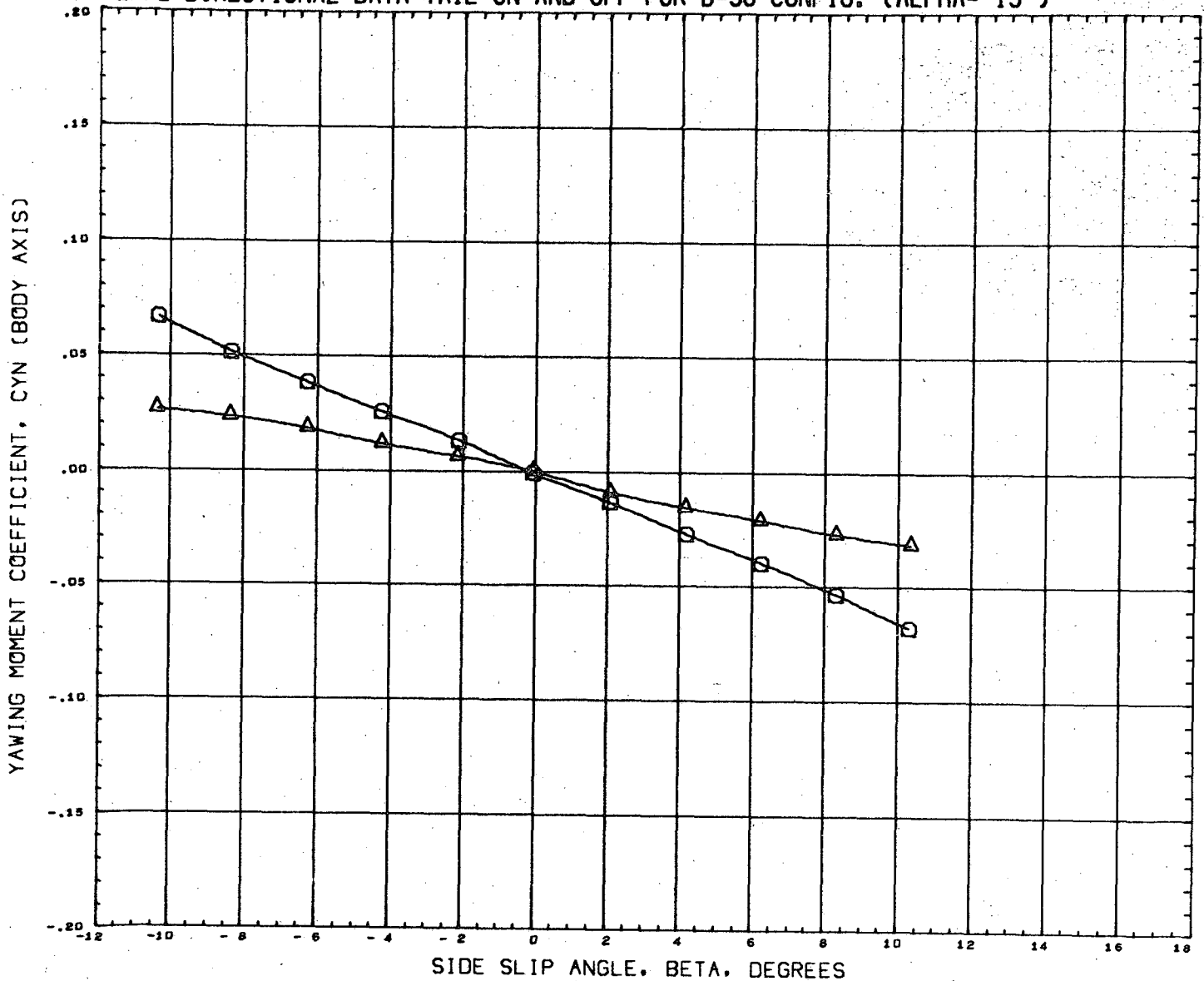
ALPHA=15 C=DR=DF
ALPHA=15 C=0 R=0

ALPHA	ELEVON	CANARD	RUDDER
15.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000

REFERENCE INFORMATION		
SREF	14.9040	50 IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MACH 4.959

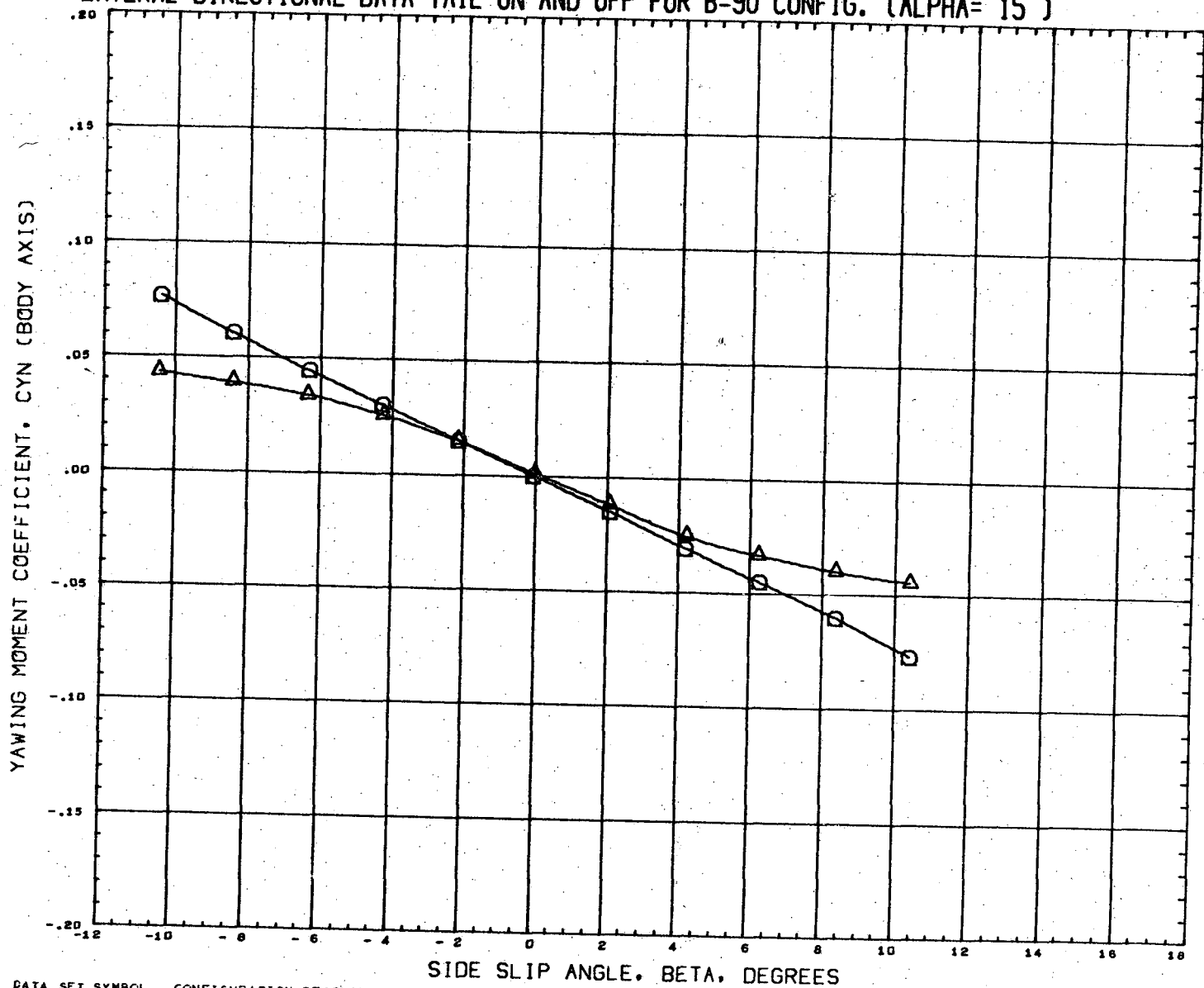
LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(A350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=DF	15.000	0.000	0.000	SREF 14.9040 59.IN.
(A357CC)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=15 C=0 R=0	15.000	0.000	0.000	LREF 3.0120 IN.
						BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 0.992

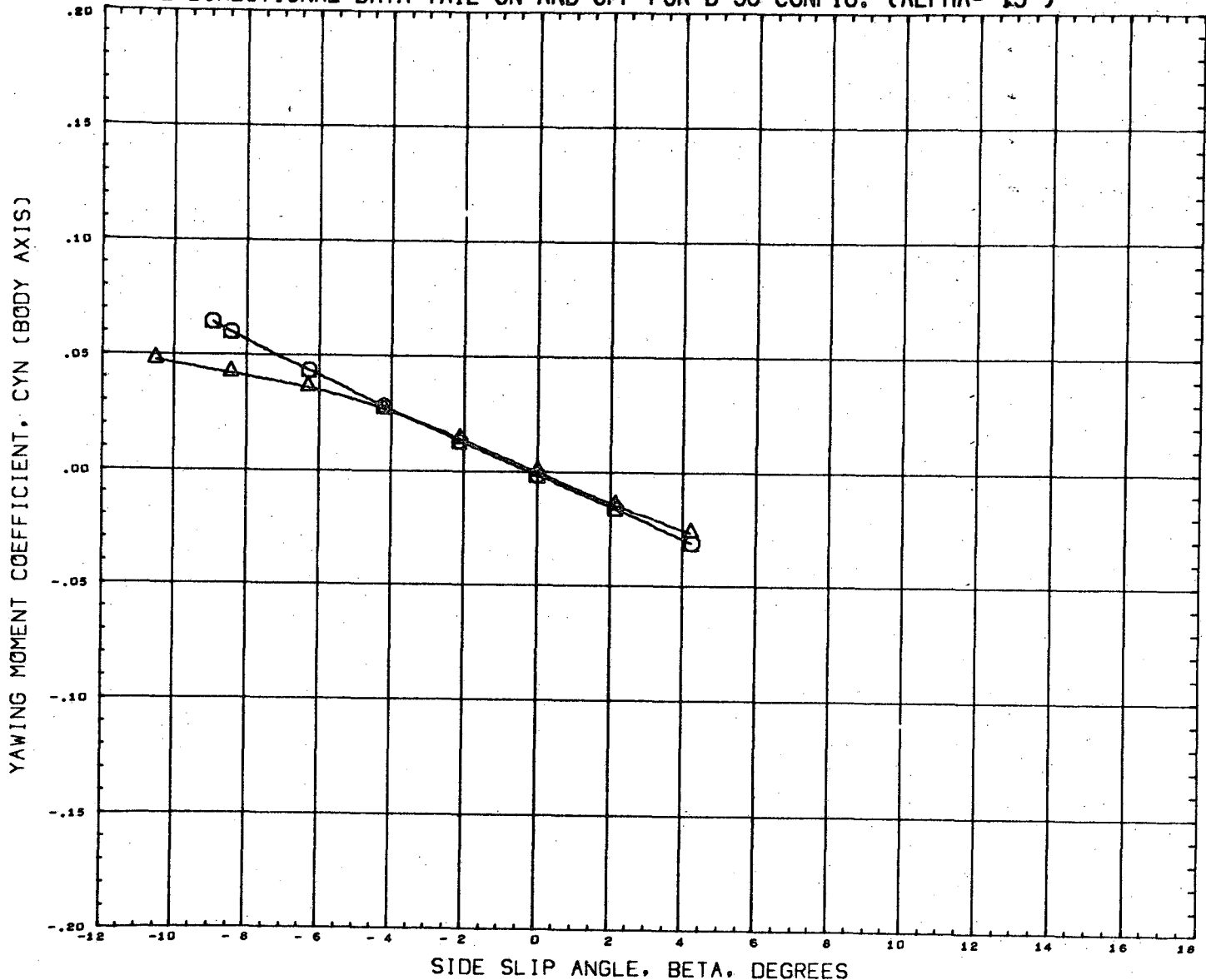
LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(A350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=DF	15.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=15 C=D R=D	15.000	0.000	0.000	LREF	3.0120 IN.
						BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.192

LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

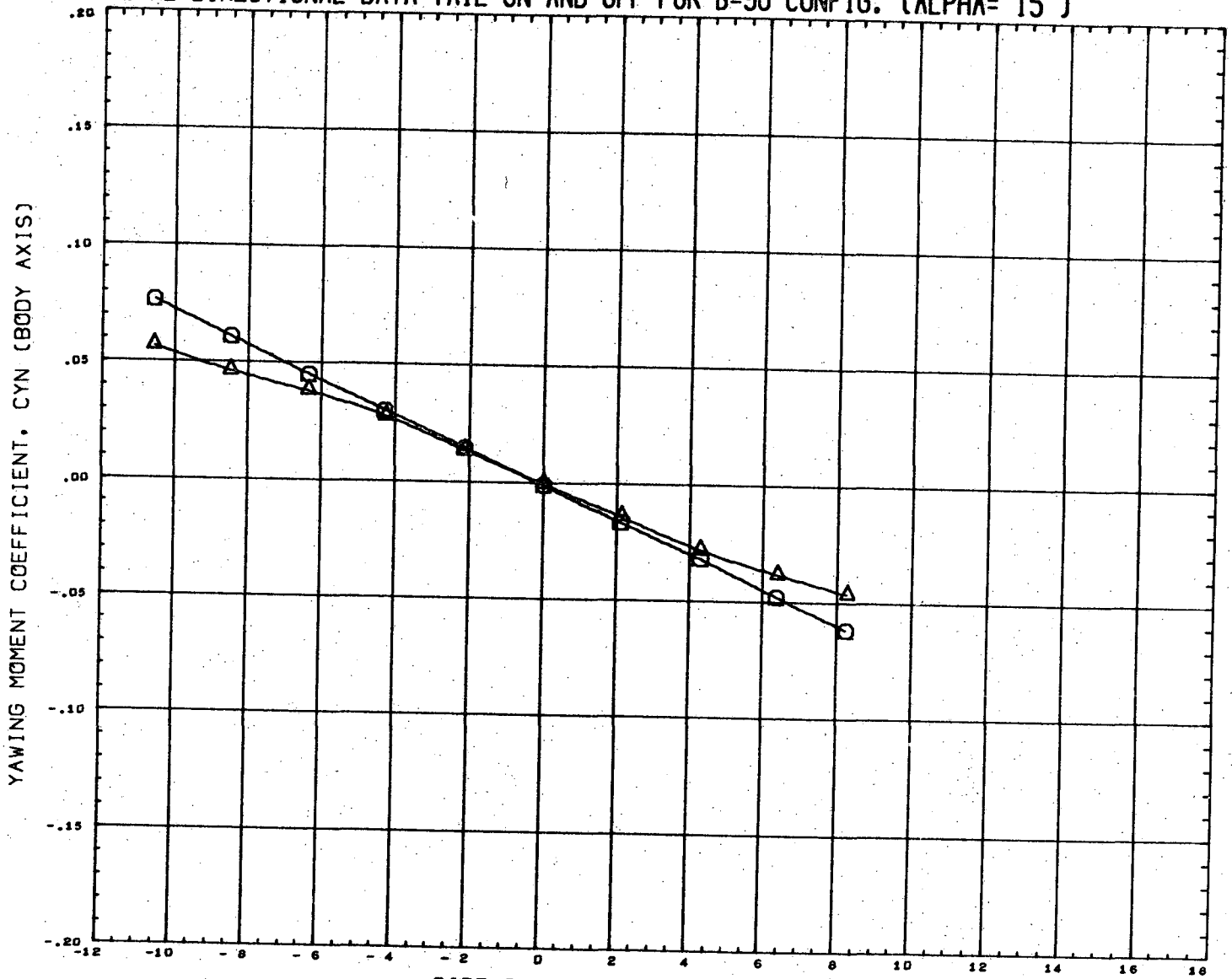
(A350CC) MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=OF
(A35TCC) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D R=0

ALPHA 15.000 ELEVON 0.000 CANARD 0.000 RUDDER 0.000
ALPHA 15.000 ELEVON 0.000 CANARD 0.000 RUDDER 0.000

REFERENCE INFORMATION
SREF 14.9040 SQ. IN.
LREF 3.0120 IN.
BREF 6.0160 IN.
XMRF 7.2990 IN.
YMRF 0.0000 IN.
ZMRF 0.0000 IN.
SCALE 0.0035

MACH 1.469

LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350CC) MSFC TWT-493 GD/C B25W19C8
 (A35TCC) MSFC TWT-493 GD/C B25W19C8V10

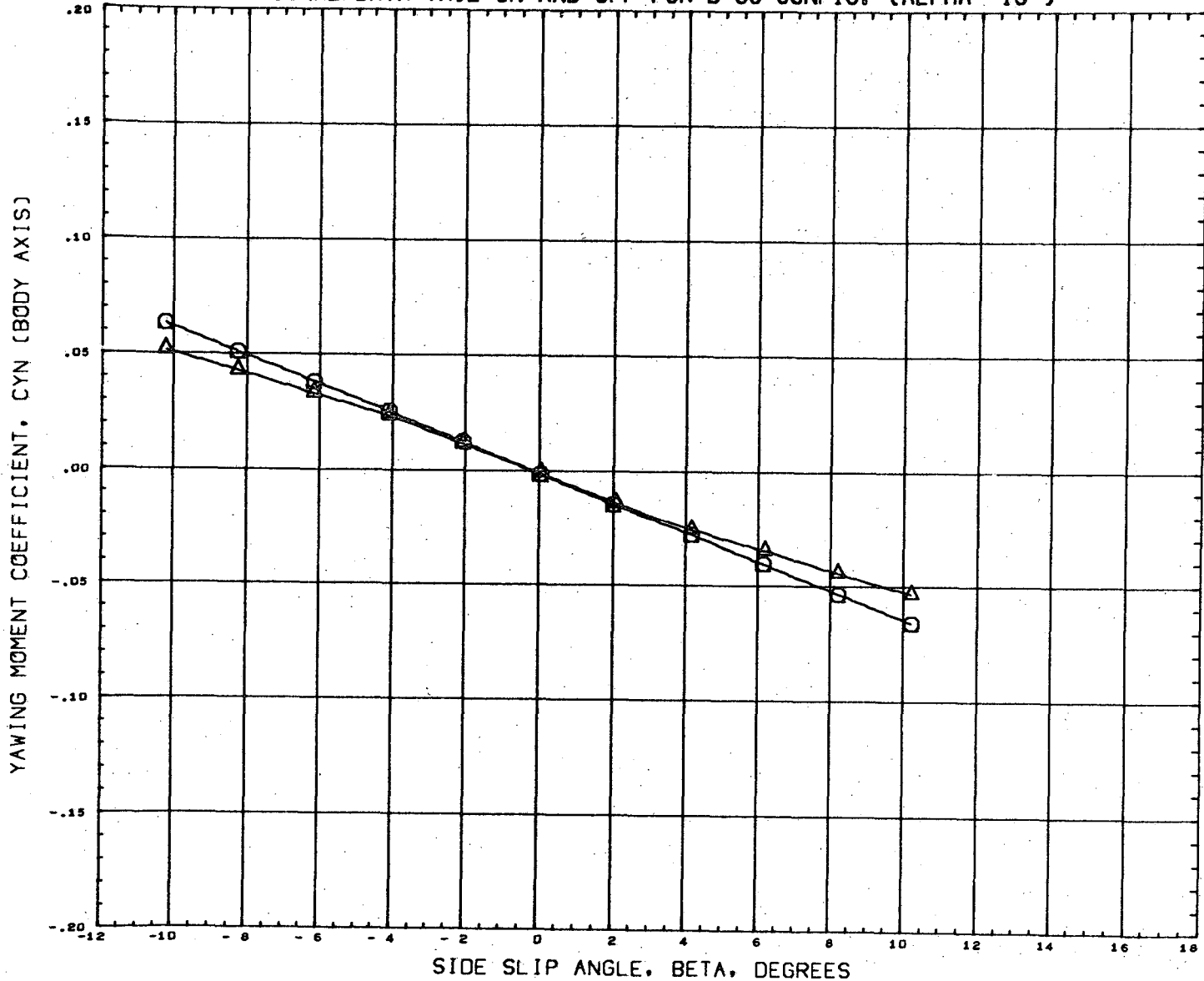
ALPHA=15 C=DR=DF
 ALPHA=15 C=D R=D



ALPHA	ELEVON	CANARD	RUDDER
15.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000

REFERENCE INFORMATION		
SREF	14.9040	Sq. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

MACH 1.964

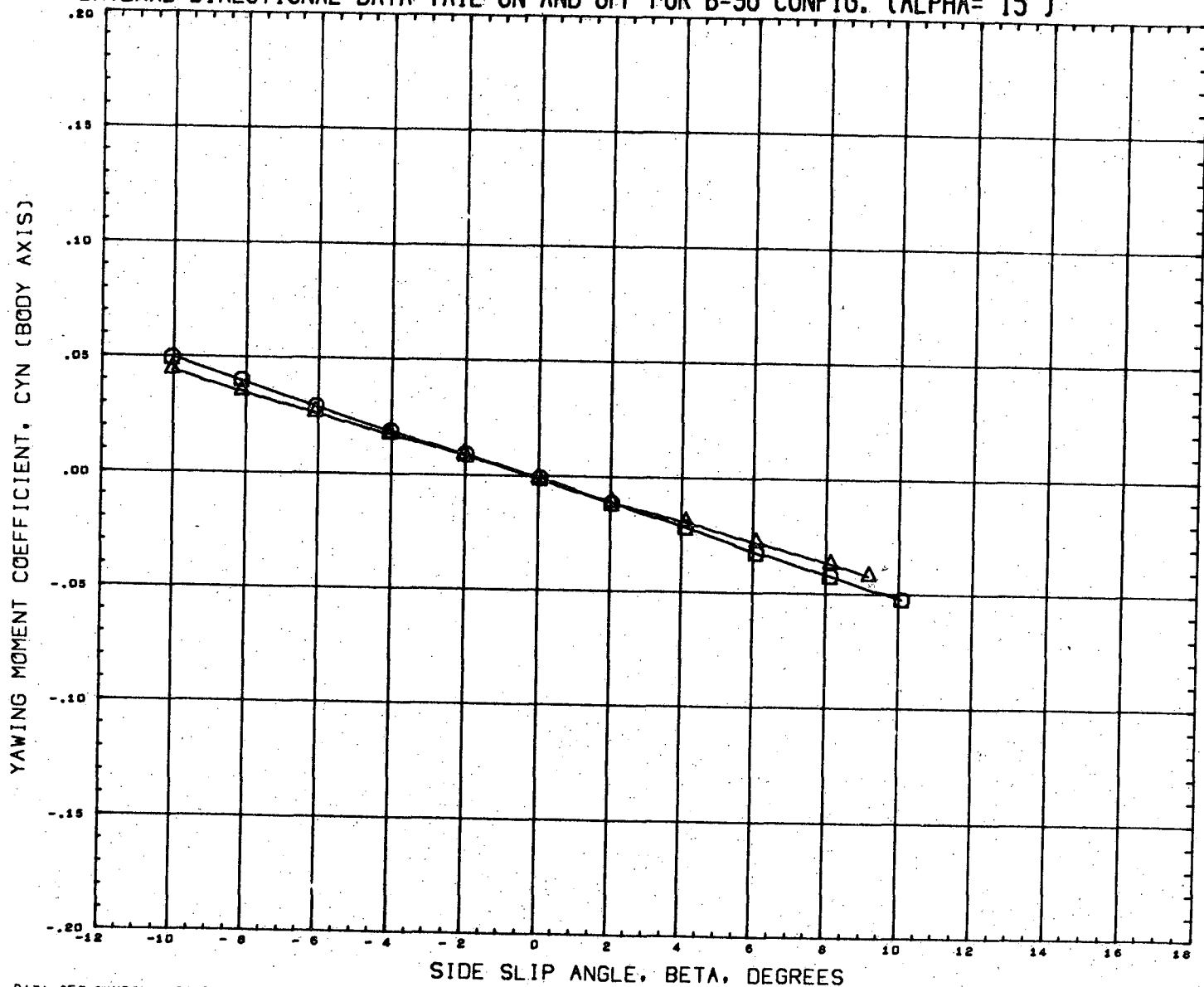
LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL		CONFIGURATION DESCRIPTION		REFLEX AIRCRAFT DATA DEGREE				REFERENCE INFORMATION				
(A35OCC)		MSFC TWT-493 GD/C	B25W19C8	ALPHA=15	C=DR=DF	15.000	0.000	0.000	0.000	SREF	14.9040	SQ. IN.
(A35TCC)		MSFC TWT-493 GD/C	B25W19C8V10	ALPHA=15	C=D R=0	15.000	0.000	0.000	0.000	LREF	3.0120	IN.
										BREF	6.0180	IN.
										XMRP	7.2990	IN.
										YMRP	0.0000	IN.
										ZMRP	0.0000	IN.
										SCALE	0.0035	
MACH		2.990										

MACH 2.990

LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350CC) MSFC TWT-493 GD/C B25W19C8

ALPHA=15 C=DR=DF

ALPHA

ELEVON

CANARD

RUDDER

REFERENCE INFORMATION

(A357CC) MSFC TWT-493 GD/C B25W19C8V10

ALPHA=15 C=D R=0

15.000

0.000

0.000

0.000

SREF

14.9040

59. IN.

LREF

3.0120

IN.

BREF

6.0160

IN.

XMRP

7.2990

IN.

YMRP

0.0000

IN.

ZMRP

0.0000

IN.

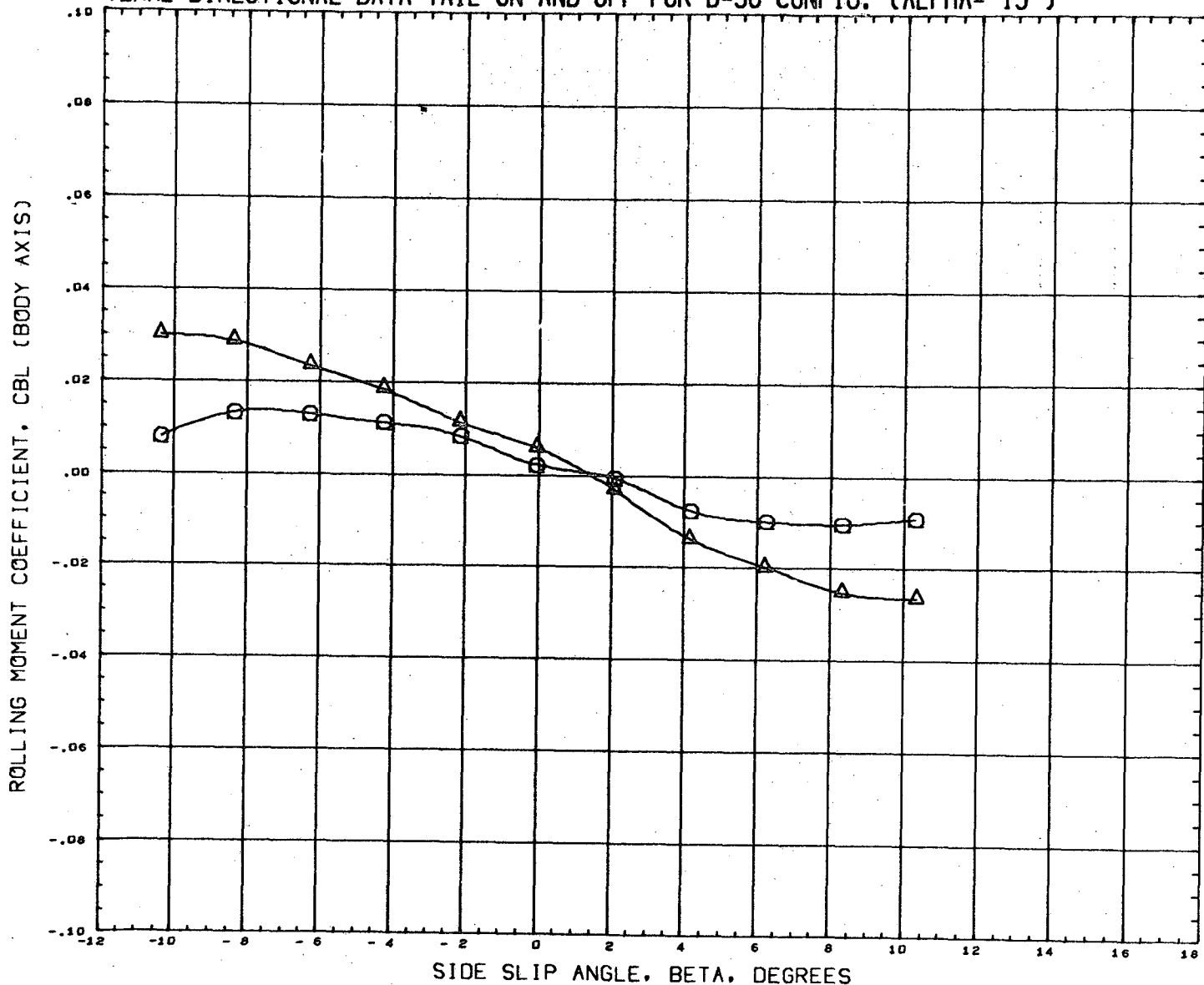
SCALE

0.0035

MACH

4.959

LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL CONFIGURATION DESCRIPTION

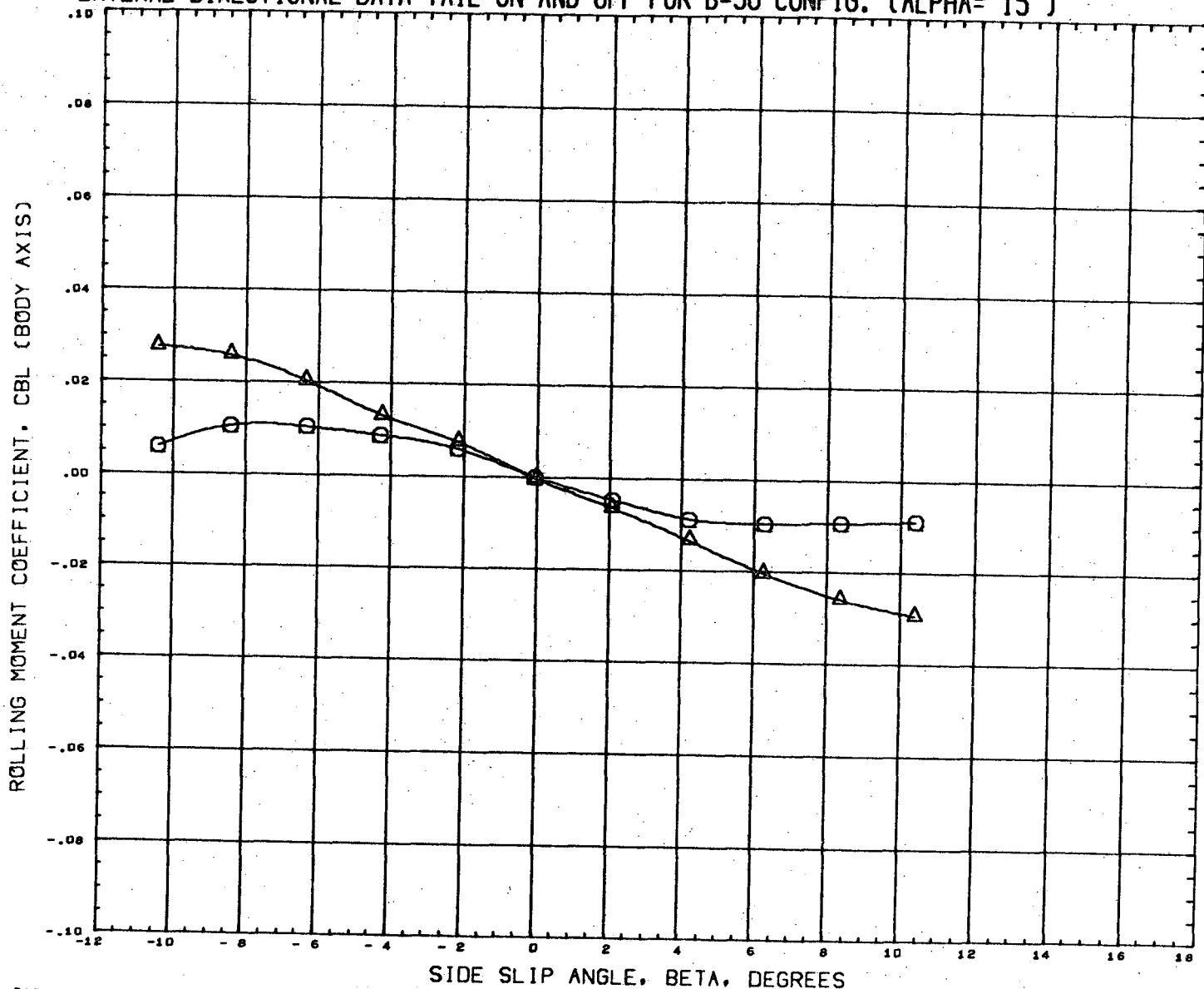
(A350CC) MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF
 (A35TCC) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D R=D

ALPHA	ELEVON	CANARD	RUDDER
15.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000



REFERENCE INFORMATION	
SREF	14.9040 SQ. IN.
LREF	3.0120 IN.
BREF	6.0180 IN.
XMRF	7.2990 IN.
YMRF	0.0000 IN.
ZMRF	0.0000 IN.
SCALE	0.0035

MACH 0.992

LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



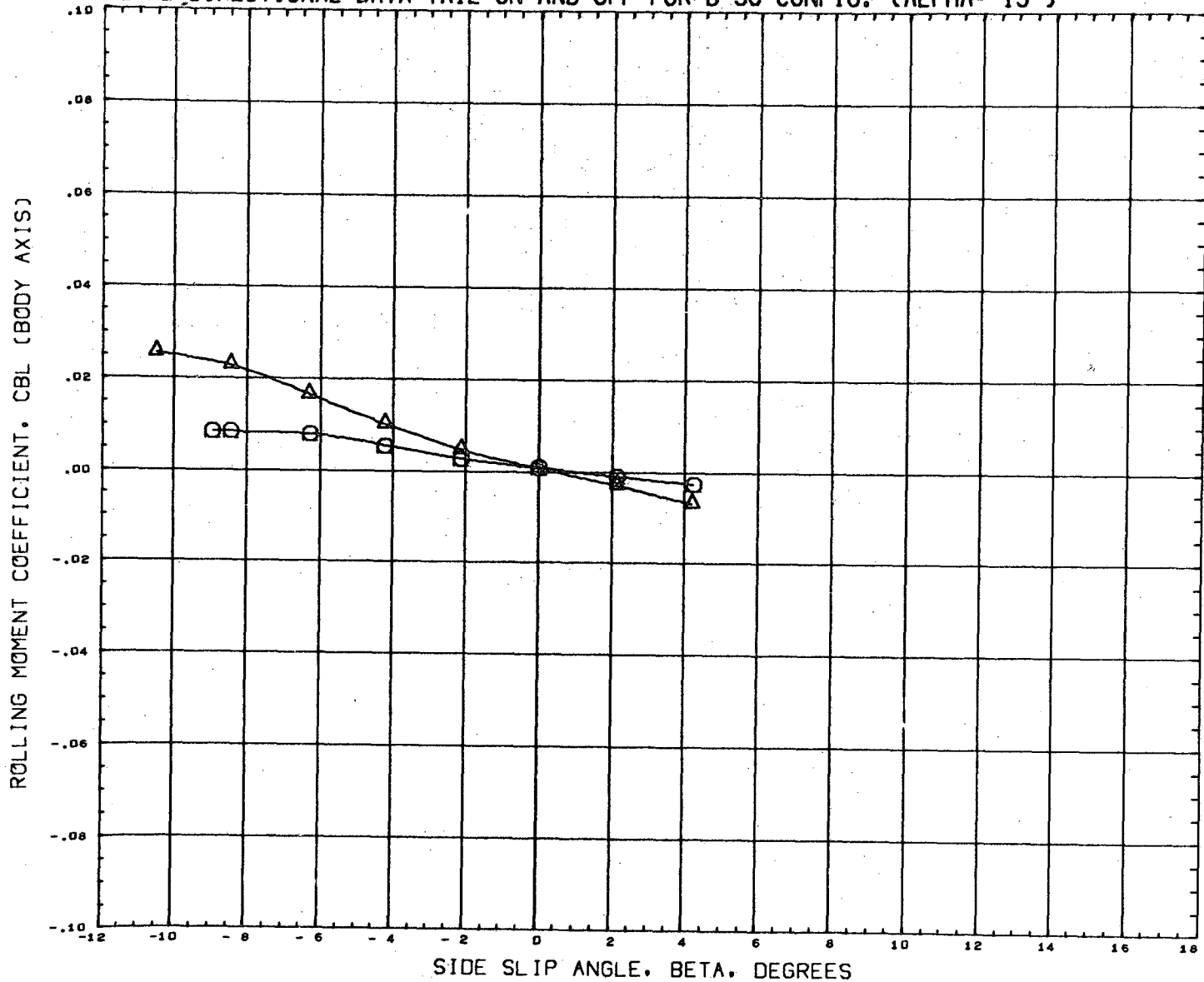
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350CC)  MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF
 (A35TCC)  MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D R=D

ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
15.000	0.000	0.000	0.000	SREF 14.9040 50. IN.
15.000	0.000	0.000	0.000	LREF 3.0120 IN.
				BREF 6.0180 IN.
				XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

MACH 1.192

LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350CC) MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=OR=OF
 (A35TCC) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=O R=O

ALPHA
 15.000
 15.000

ELEVON
 0.000
 0.000

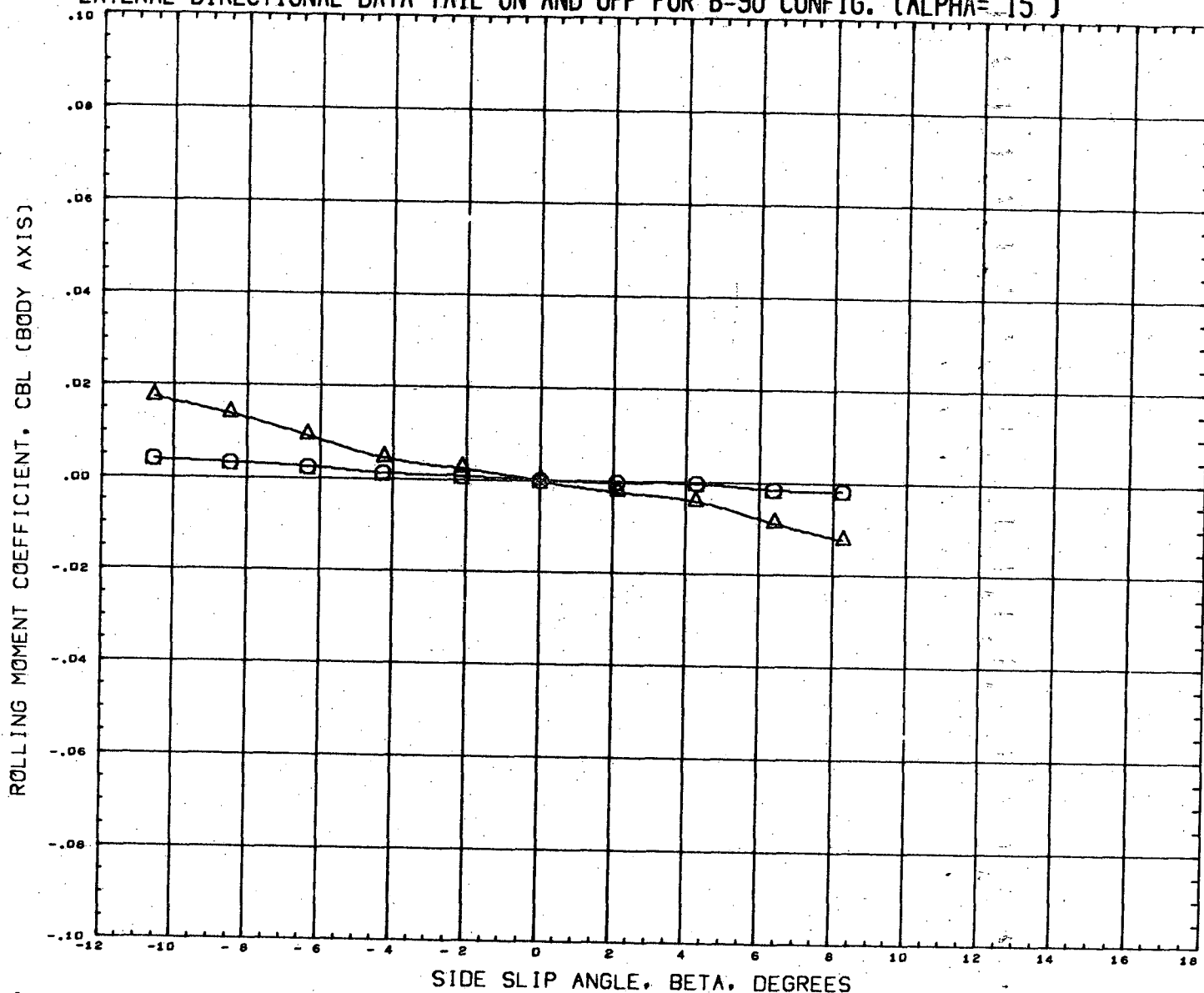
CANARD
 0.000
 0.000

RUDDER
 0.000
 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 1.469

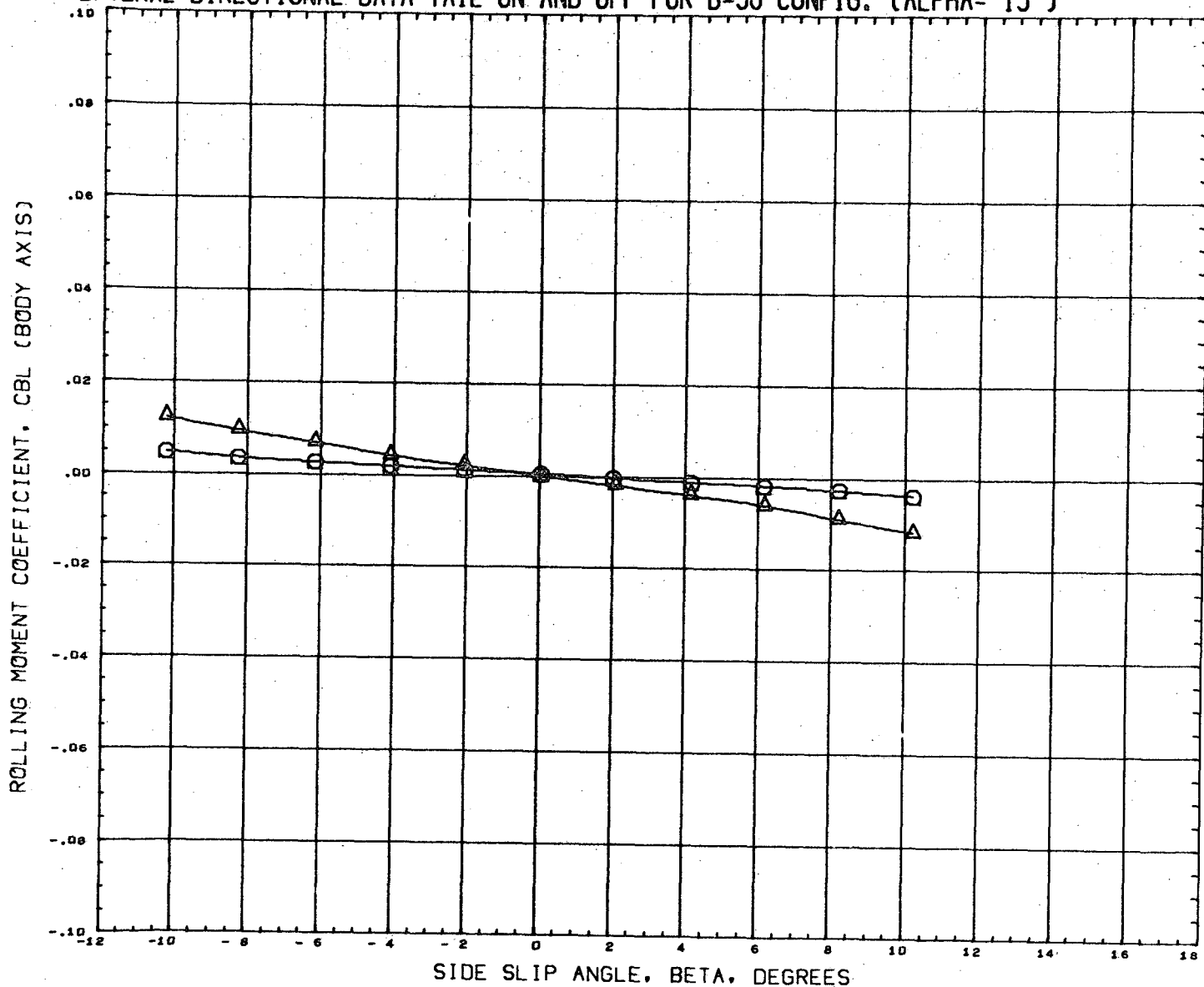
LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA=15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(A35OCC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=DF	15.000	0.000	0.000	0.000
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V1D	ALPHA=15 C=D R=D	15.000	0.000	0.000	0.000
						SREF 14.9040 SQ. IN.
						LREF 3.0120 IN.
						BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 1.964

LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A350CC) MSFC TWT-493 GD/C B25W19C8
(A35TCC) MSFC TWT-493 GD/C B25W19C8V10

ALPHA=15 C=OR=OF
ALPHA=15 C=D R=D

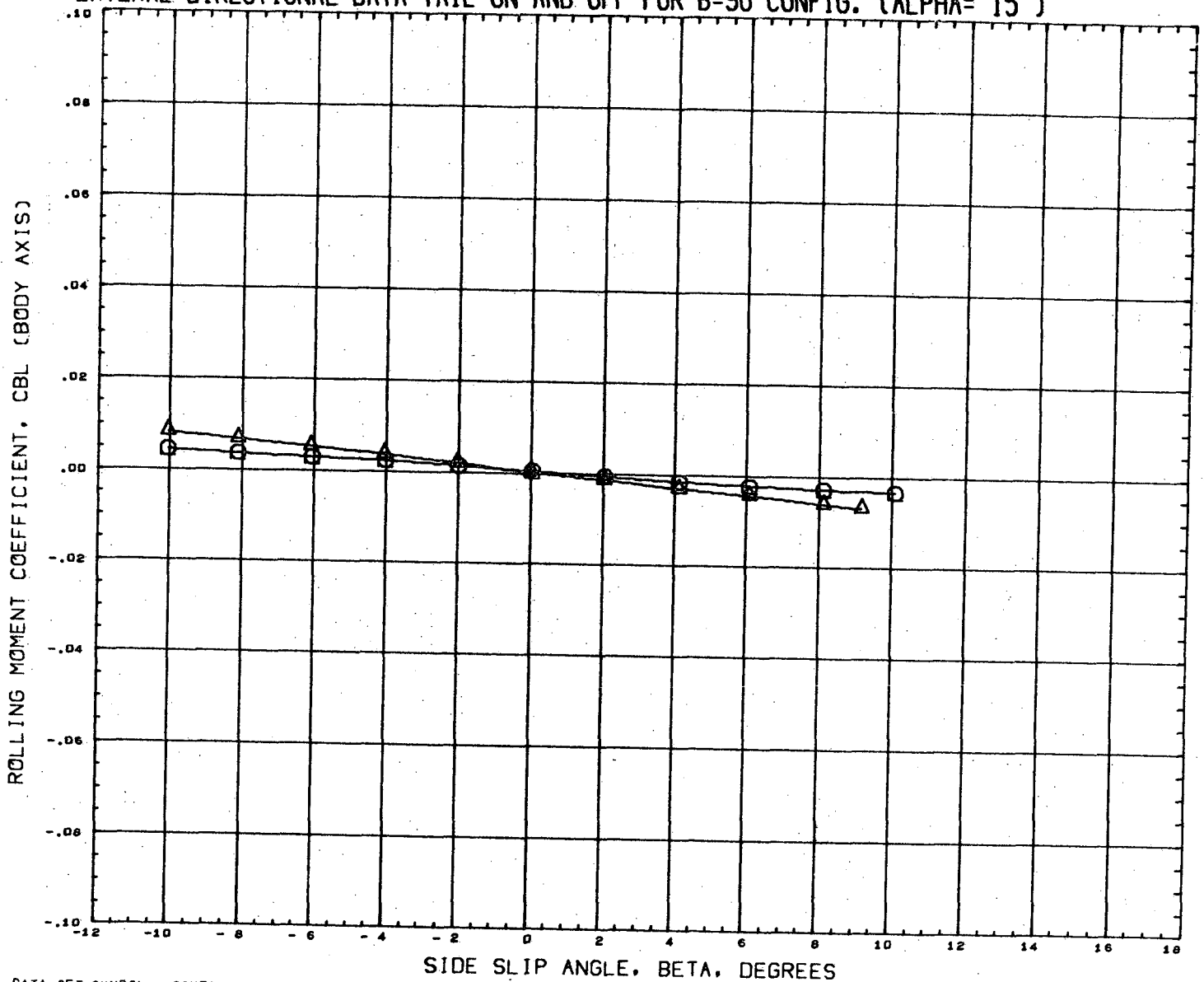
ALPHA 15.000
ELEVON 0.000
CANARD 0.000
RUDDER 0.000

REFERENCE INFORMATION

SREF 14.9040 SQ. IN.
LREF 3.0120 IN.
BREF 6.0180 IN.
XMRP 7.2990 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0035

MACH 2.990

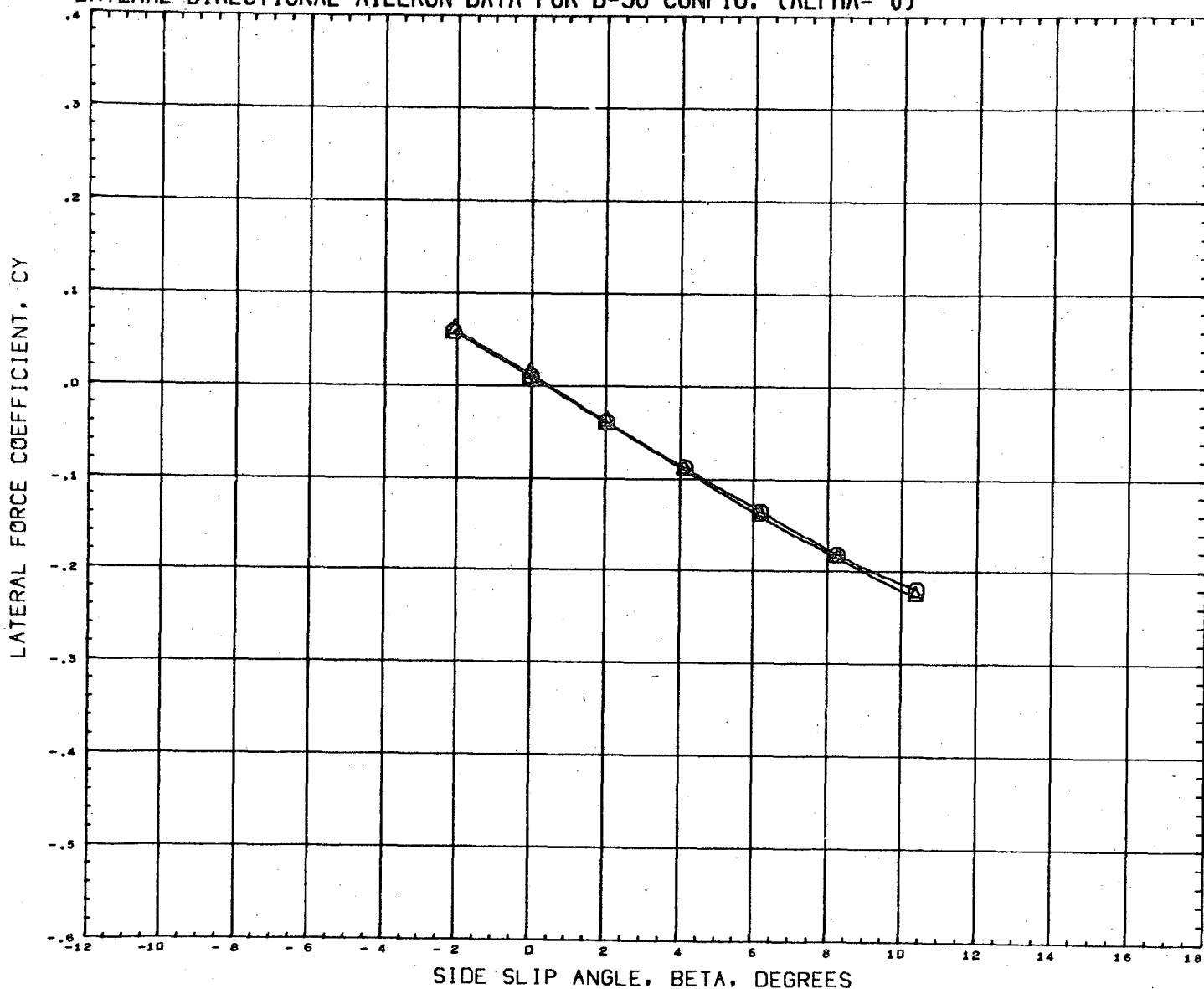
LATERAL-DIRECTIONAL DATA TAIL ON AND OFF FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(A350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=DF	15.000	0.000	0.000	0.000
(A35TCC)	MSFC TWT-493 GD/C B25W19C8V10	ALPHA=15 C=D R=0	15.000	0.000	0.000	0.000
						SREF 14.9040 SQ. IN.
						LREF 3.0120 IN.
						BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 4.959

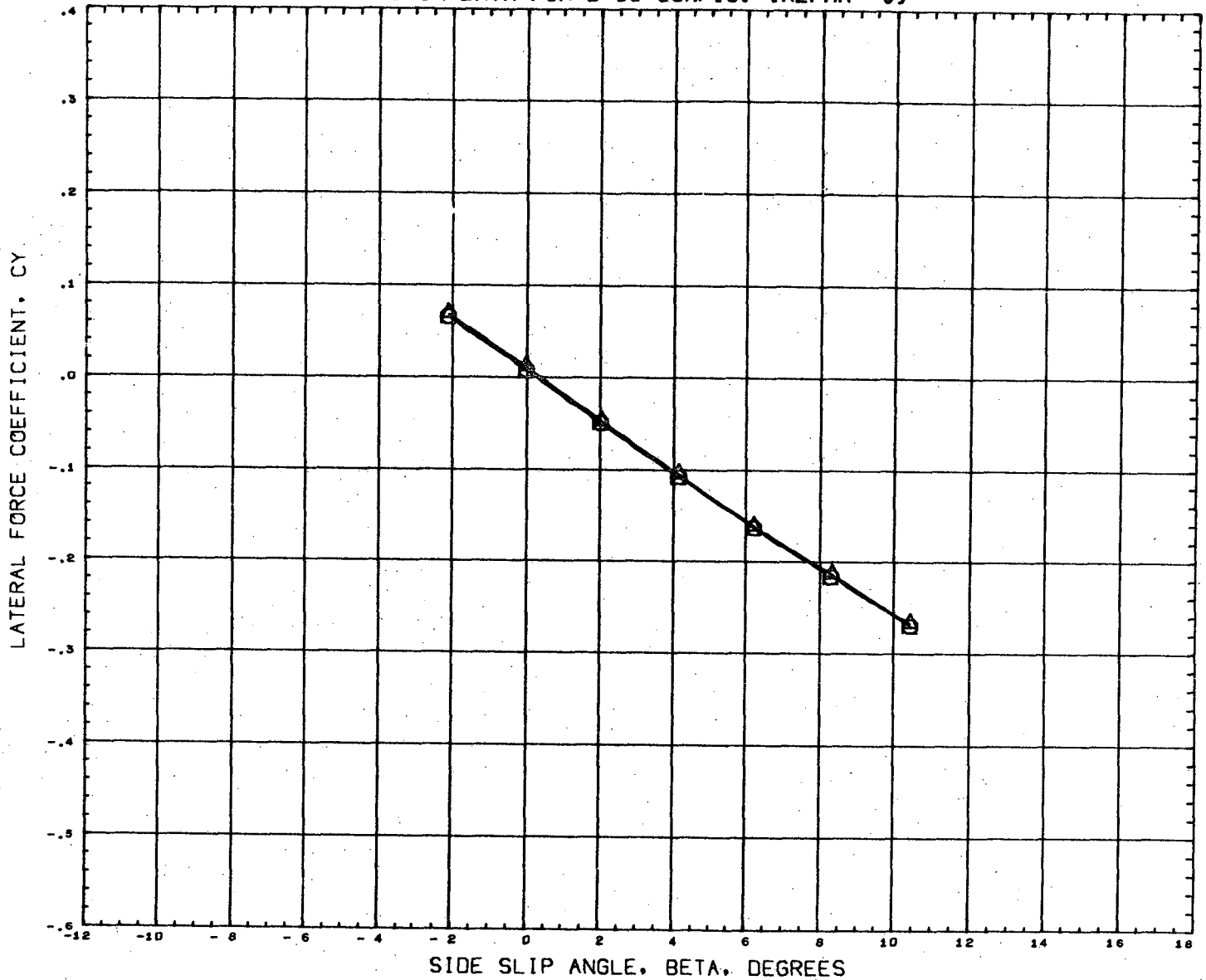
LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	AILRON	RUDDER	CANARD	REFERENCE INFORMATION	
(C35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0	0.000		0.000	0.000	SREF	14.9040 SQ. IN.
(A35ADA)	MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=0 A=10	0.000	10.000	0.000	0.000	LREF	3.0120 IN.
						BREF	6.0180 IN.
						XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 0.903

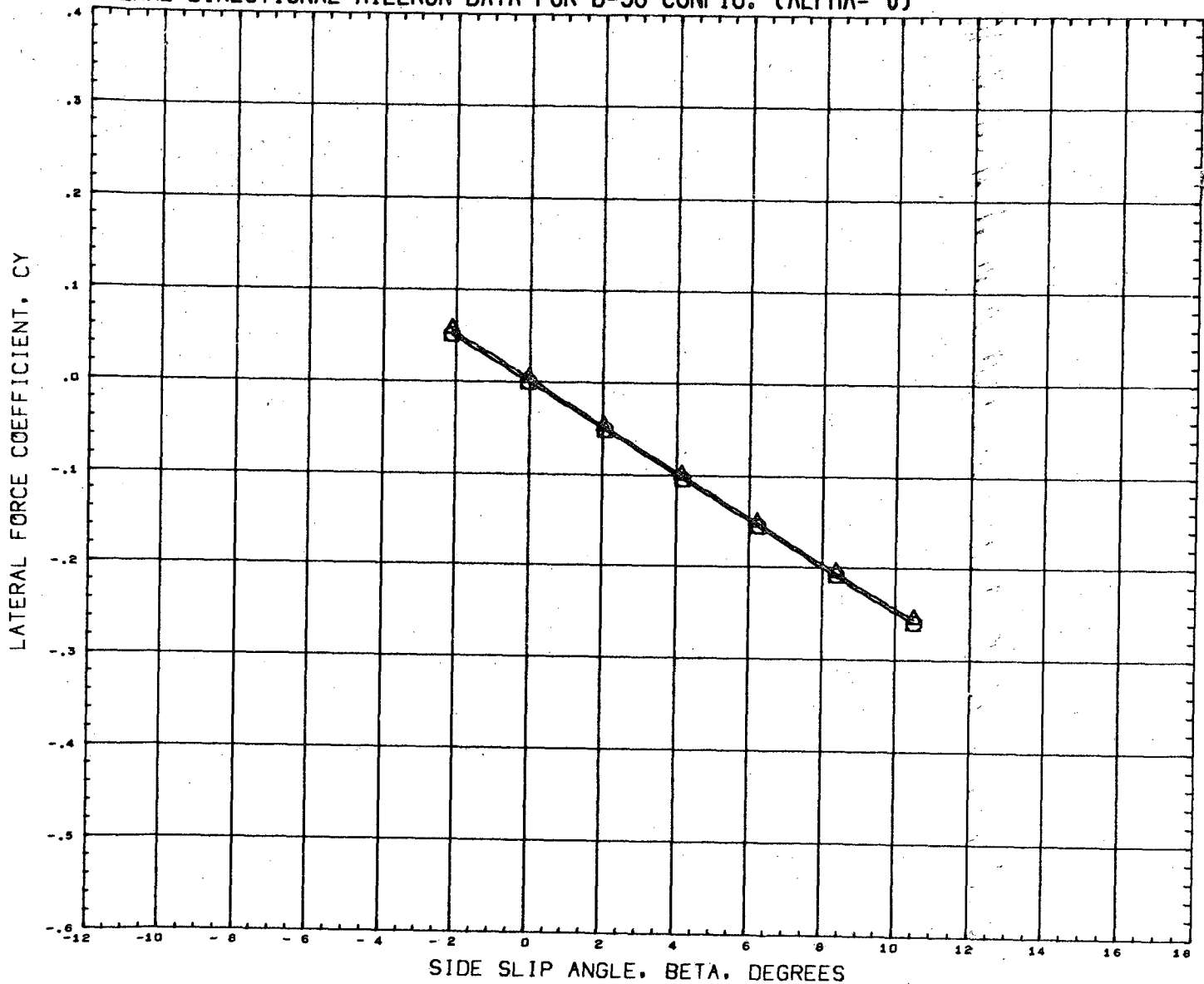
LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	AILRON	RUDDER	CANARD	REFERENCE INFORMATION		
(C35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0	0.000		0.000	0.000	SREF	14.9040	50. IN.
(A35ADA)	MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=0 A=10	0.000	10.000	0.000	0.000	LREF	3.0120	IN.
						BREF	6.0180	IN.
						XMRP	7.2990	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0035	

MACH 0.996

LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C35TDA) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0
 (A35ADA) MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=0 A=10

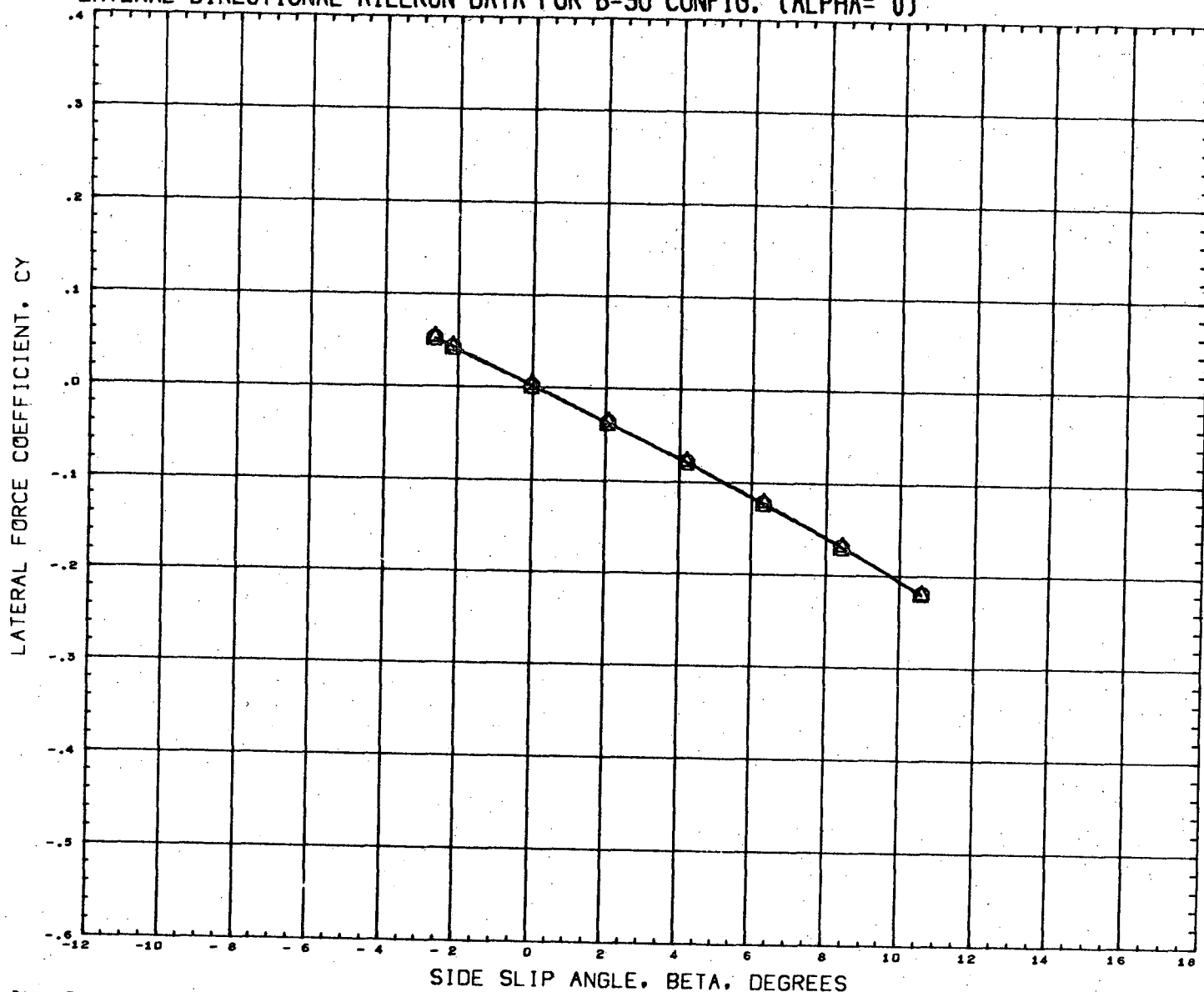
ELEVON AILRON RUDDER CANARD
 0.000 0.000 0.000 0.000
 0.000 10.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRF 7.2990 IN.
 YMRF 0.0000 IN.
 ZMRF 0.0000 IN.
 SCALE 0.0035

MACH

1.197

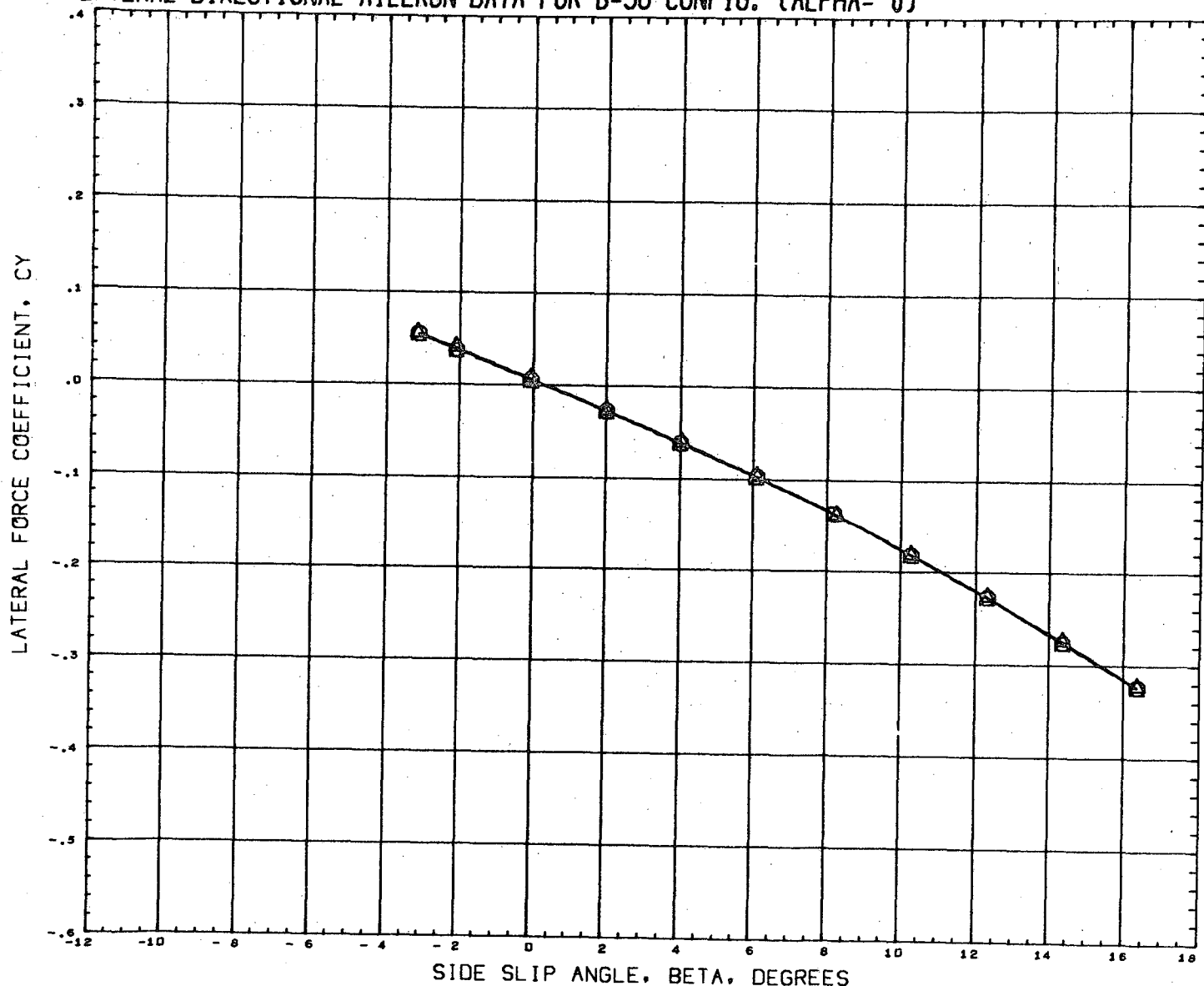
LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	AILRON	RUDDER	CANARD	REFERENCE INFORMATION	
(C35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A35ADA)	MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=0 A=10	0.000	10.000	0.000	0.000	LREF	3.0120 IN.
						BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.950

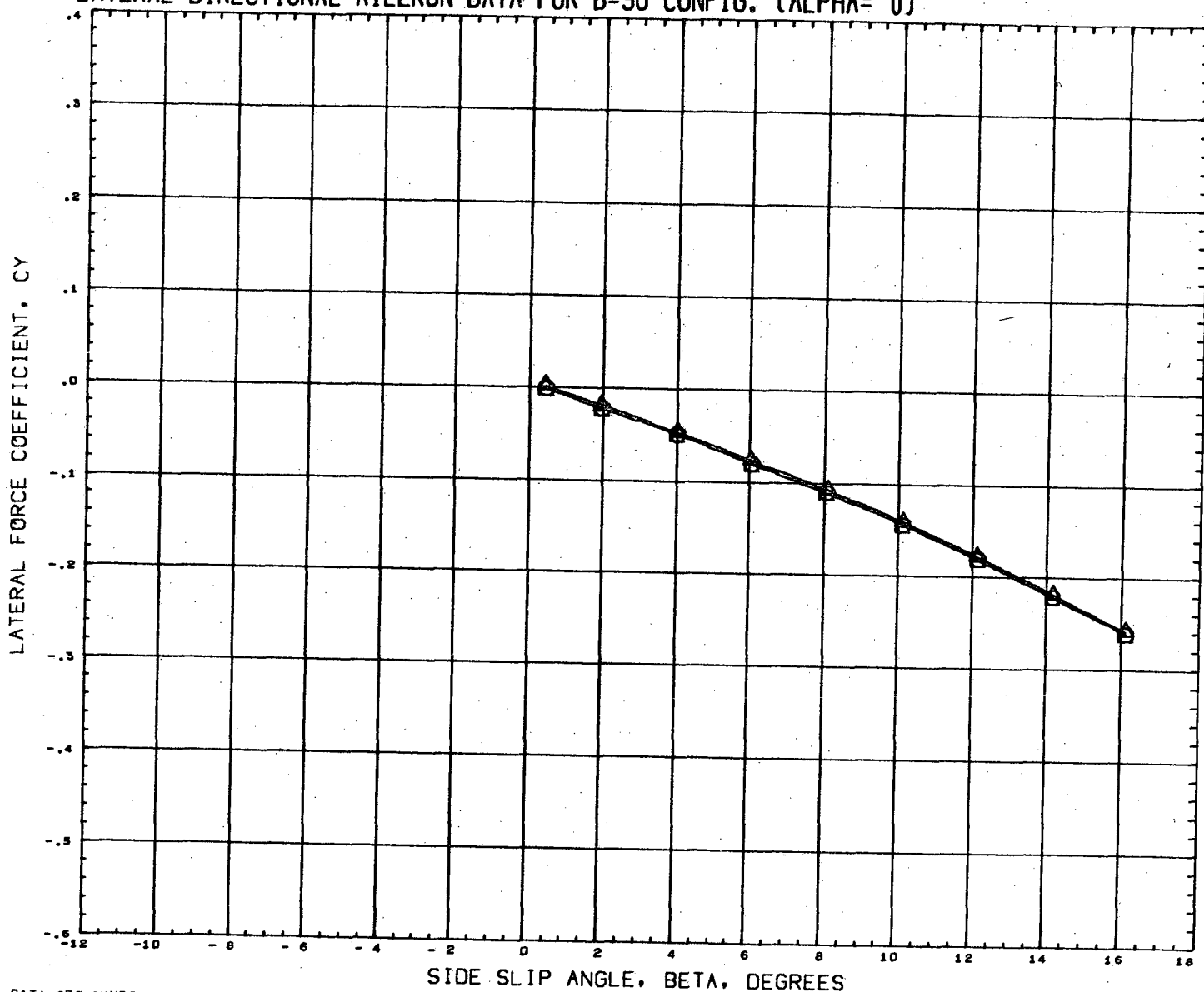
LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	AILRON	RUDDER	CANARD	REFERENCE INFORMATION
(C35TDA)	MSFC TWT-493 GD/C B25W19C0V10 ALPHA=0 C=D R=0	0.000		0.000	0.000	SREF 14.9040 SQ. IN.
(A35ADA)	MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=D A=10	0.000	10.000	0.000	0.000	LREF 3.0120 IN.
						BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 2.990

LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

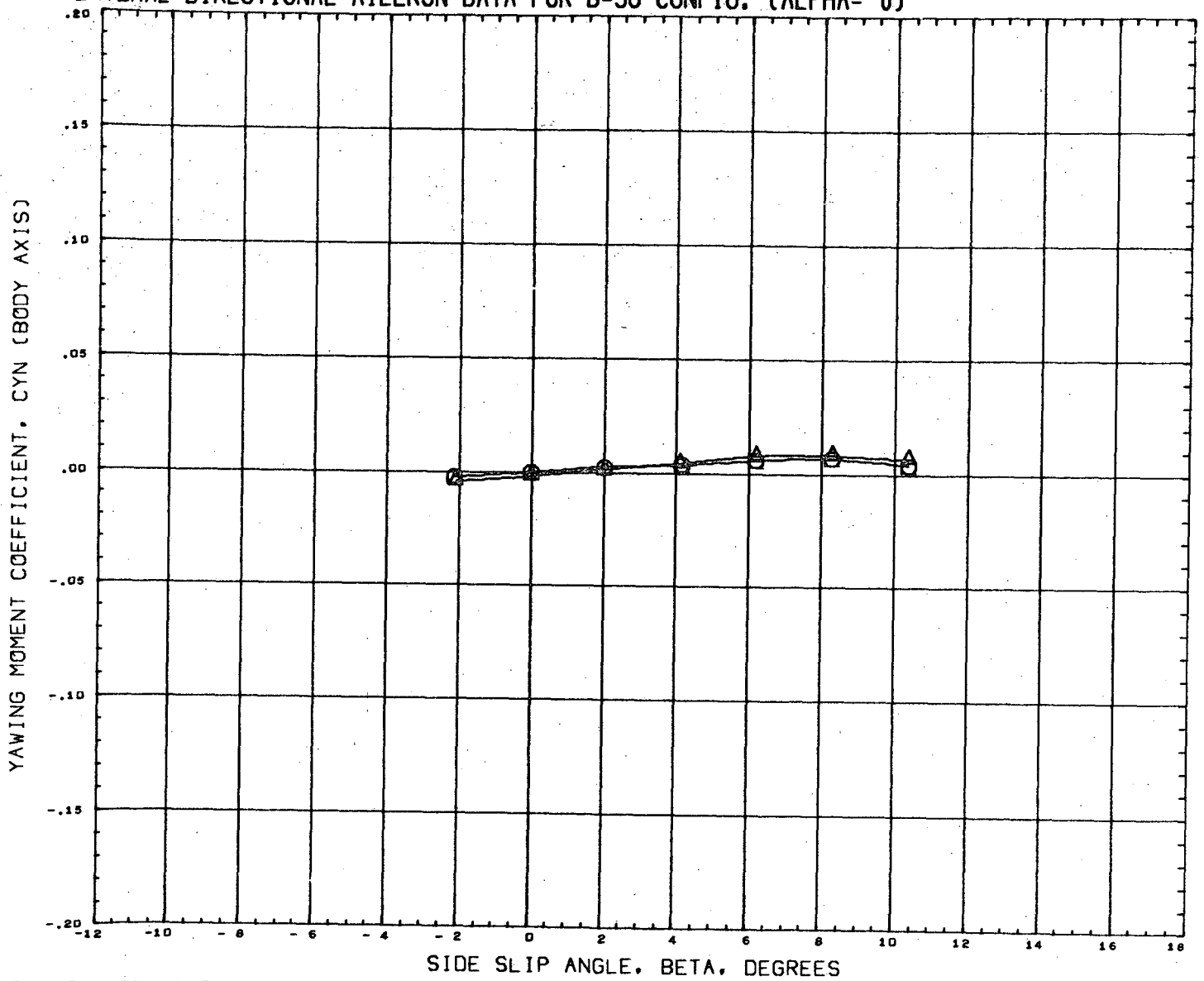
(C35TDA) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0
 (A35ADA) MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=0 A=10

ELEVON AILERON RUDDER CANARD
 0.000 0.000 0.000 0.000
 0.000 10.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0160 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 4.959

LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

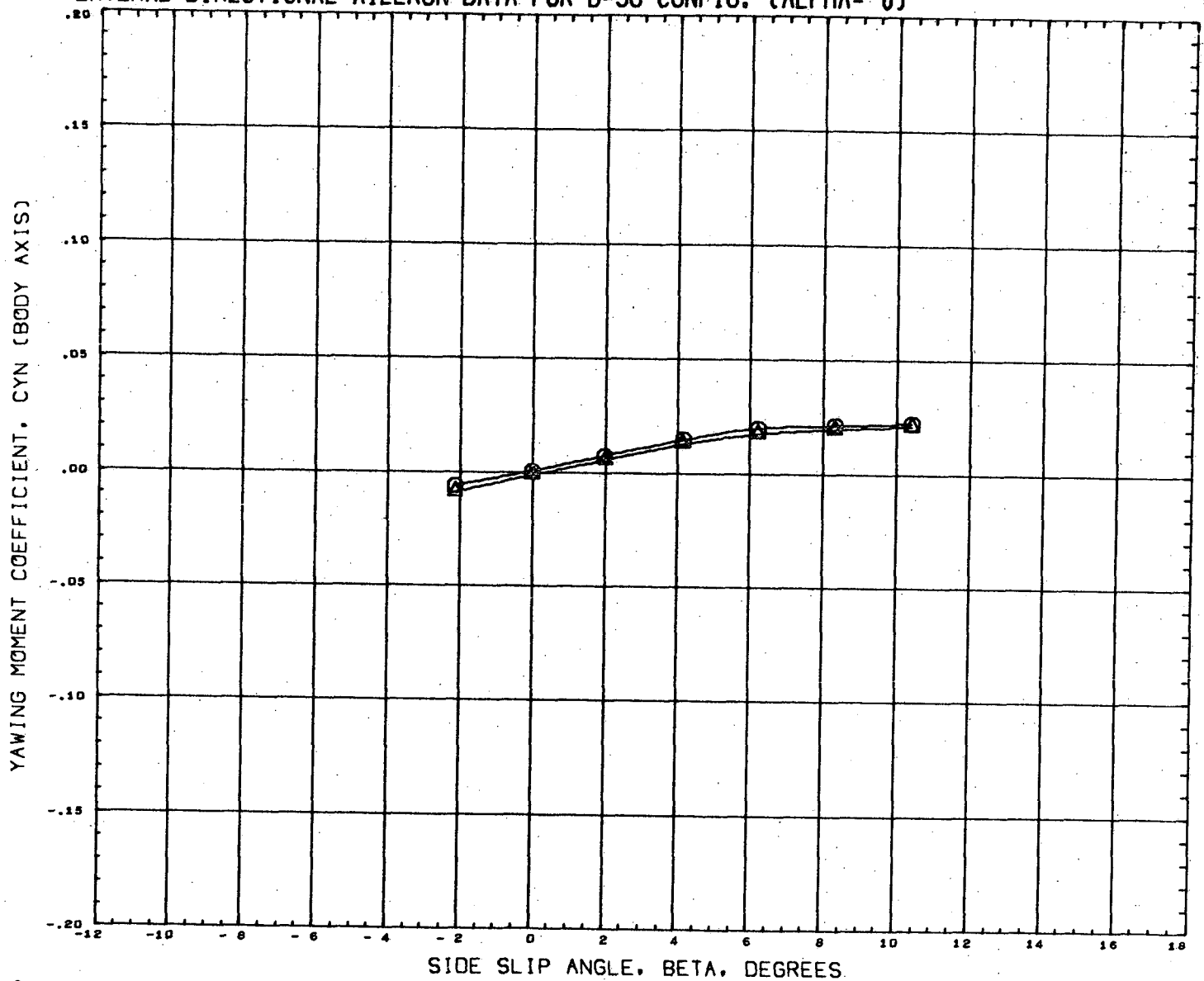
(C35TDA) MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=0 R=0
 (A35ADA) MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=0 A=10

ELEVON AILRON RUDDER CANARD
 0.000 10.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0160 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 0.903

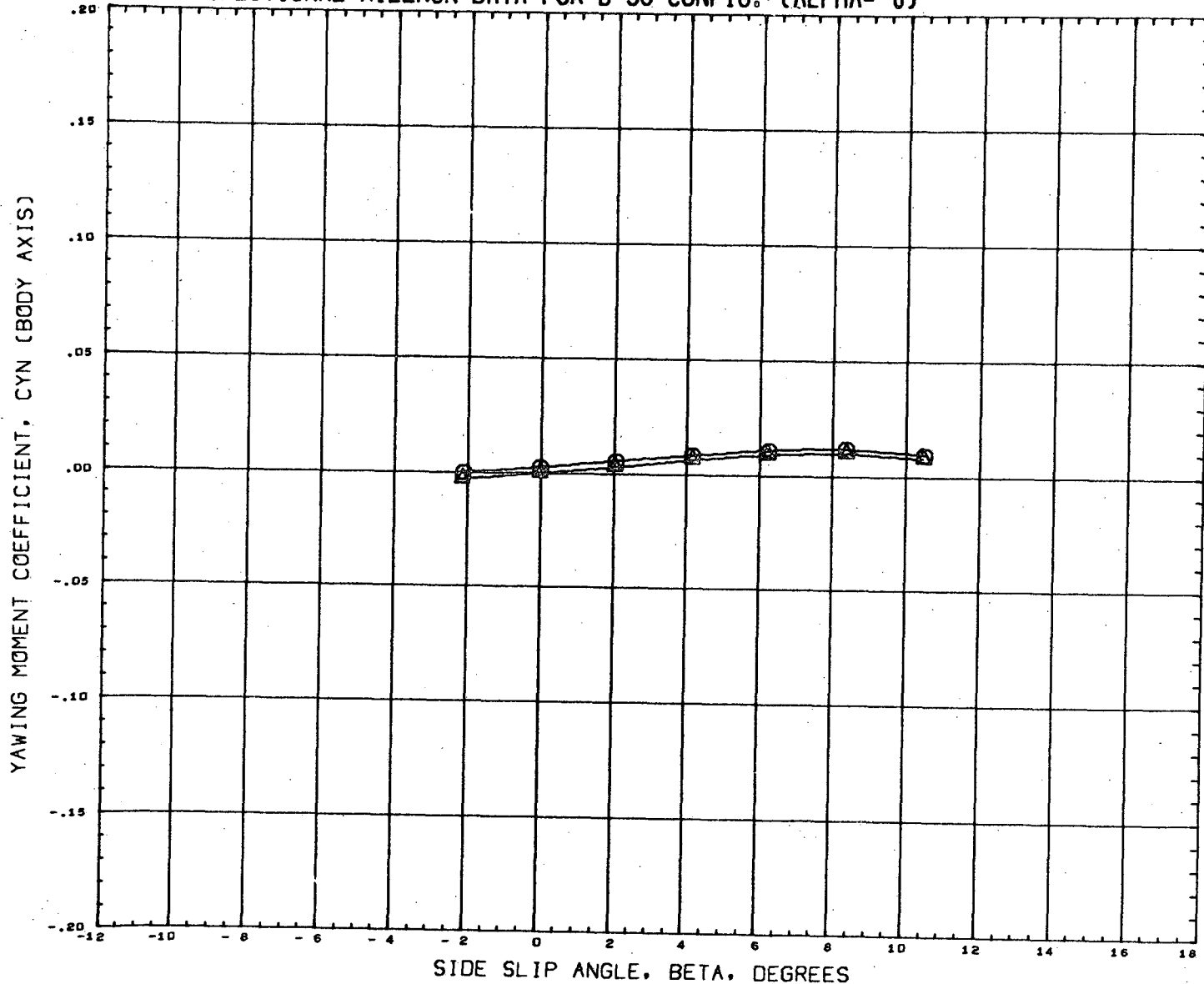
LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	AILRON	RUDDER	CANARD	REFERENCE INFORMATION
(C35TDA)	MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=0 R=0	0.000		0.000	0.000	SREF 14.9040 SQ. IN.
(A35ADA)	MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=0 A=10	0.000	10.000	0.000	0.000	LREF 3.0120 IN.
						BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 0.996

LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

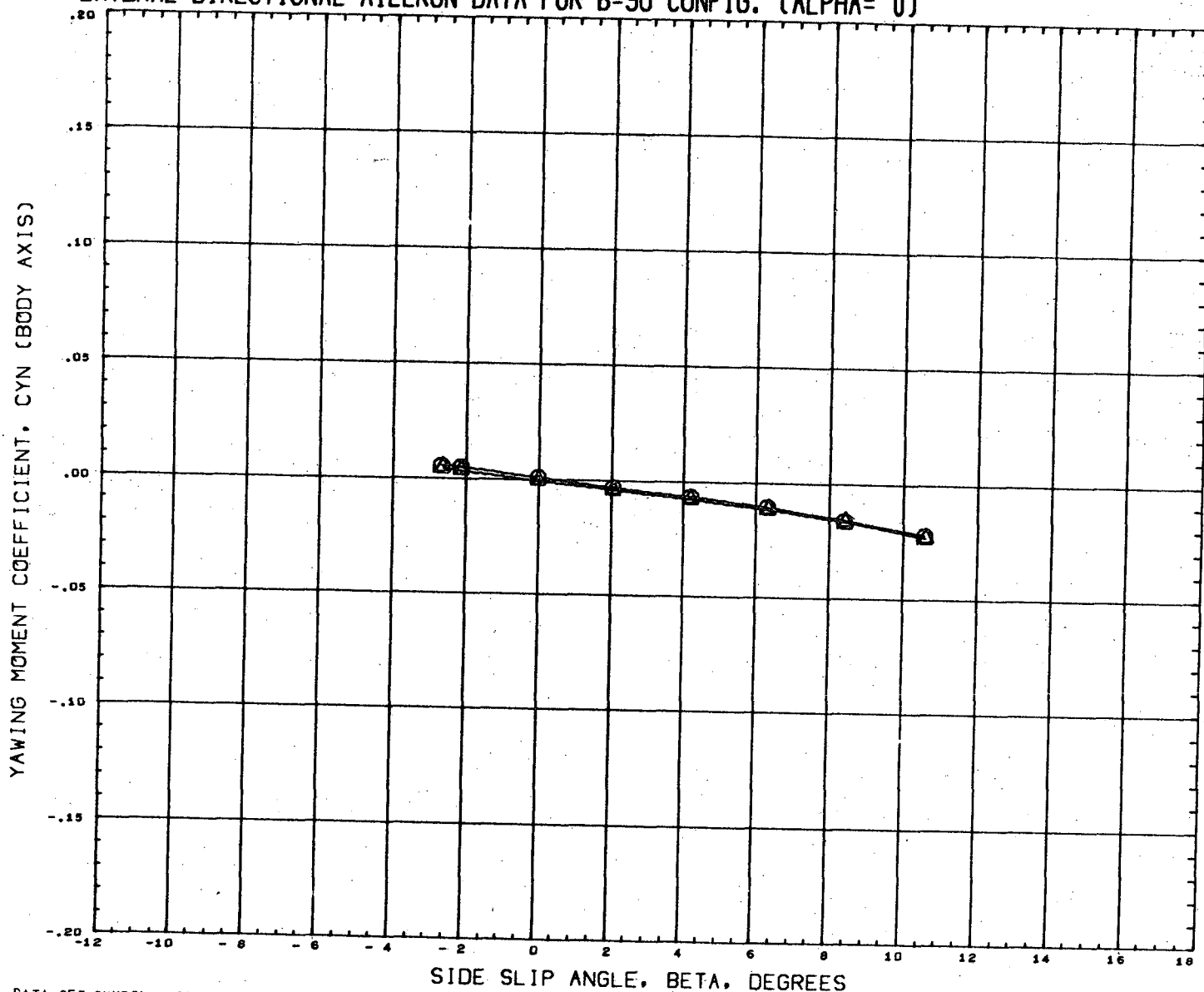
(C351DA) MSFC TWT-493 6D/C B25W19C8V10 ALPHA=0 C=0 R=0
 (A351DA) MSFC TWT-493 6D/C B25W19C8V10 ALPHA=0 C=0 A=10

ELEVON AILRON RUDDER CANARD
 0.000 10.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 1.197

LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)

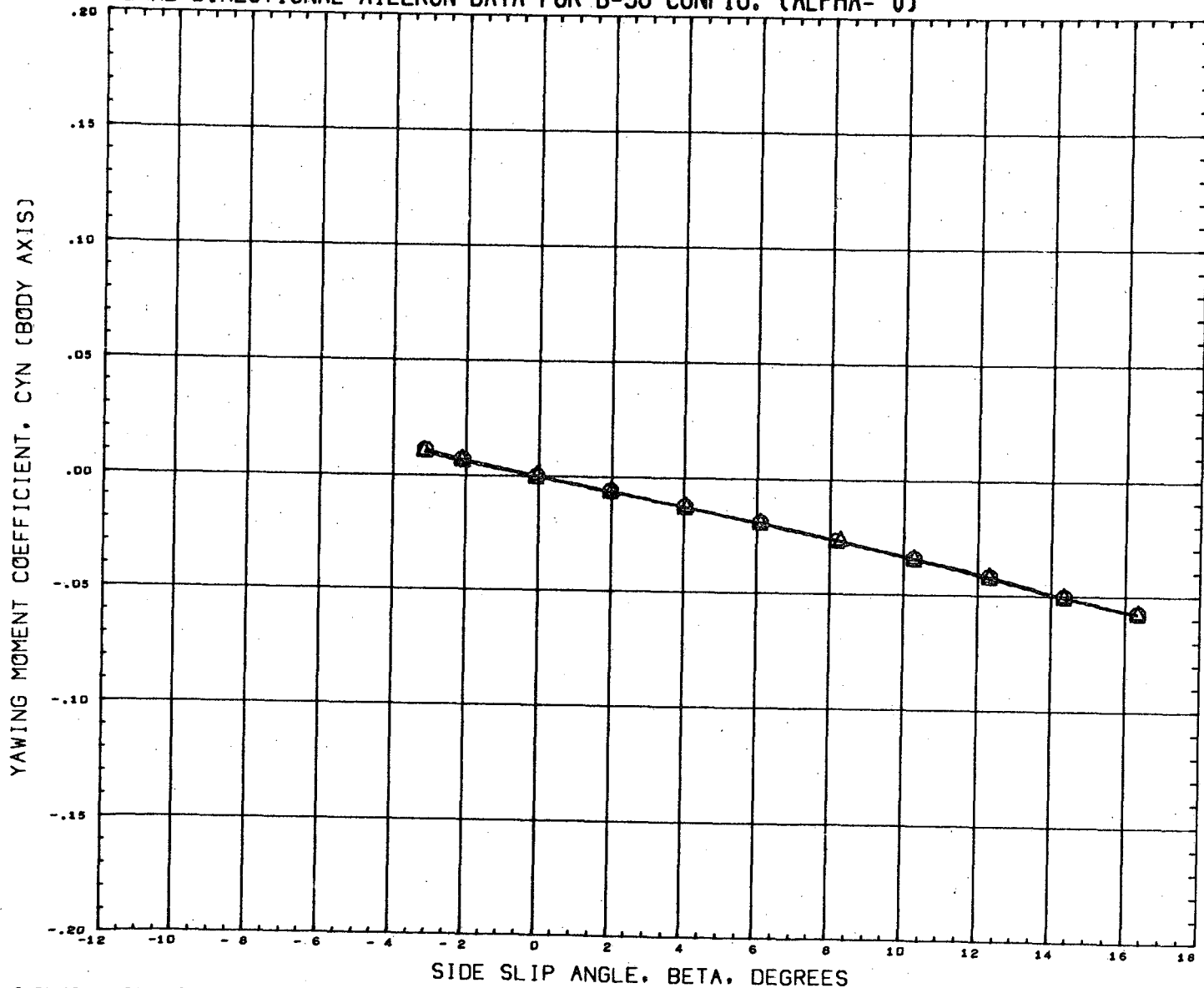


DATA SET SYMBOL CONFIGURATION DESCRIPTION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	C=0	R=0	ELEVON	AILRON	RUDDER	CANARD	REFERENCE INFORMATION
(C35TDA)	MSFC TWT-493 GD/C B25W19C8V10	0	0	0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A35ADA)	MSFC TWT-493 GD/C B25W19CBV10	0	0	10	0.000	10.000	0.000	0.000	LREF 3.0120 IN.
									BREF 6.0180 IN.
									XMRF 7.2990 IN.
									YMRP 0.0000 IN.
									ZMRP 0.0000 IN.
									SCALE 0.0035

MACH 1.950

LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

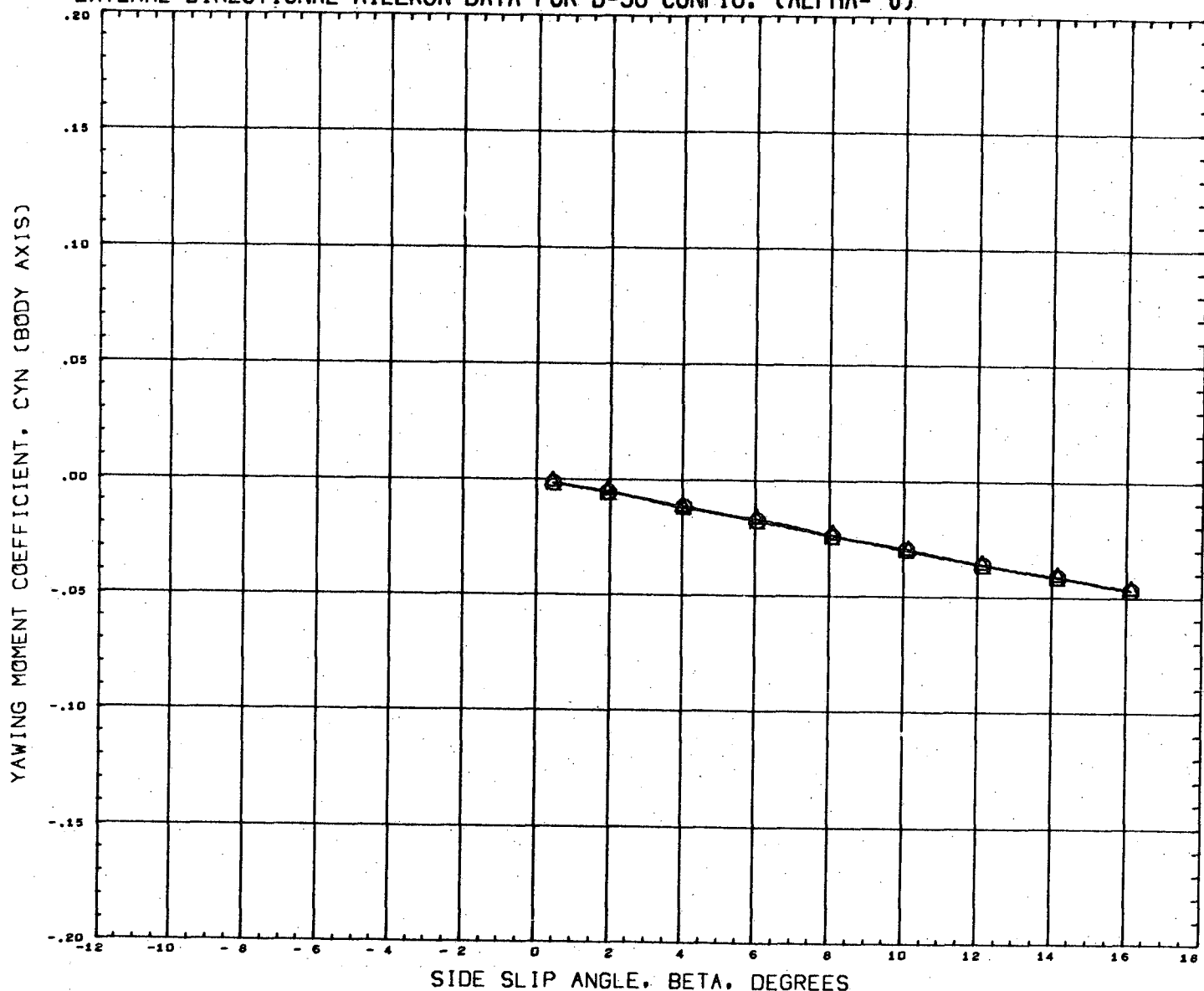
(C35TDA) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0
 (A35ADA) MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=0 A=10

ELEVON AILRON RUDDER CANARD
 0.000 10.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 2.990

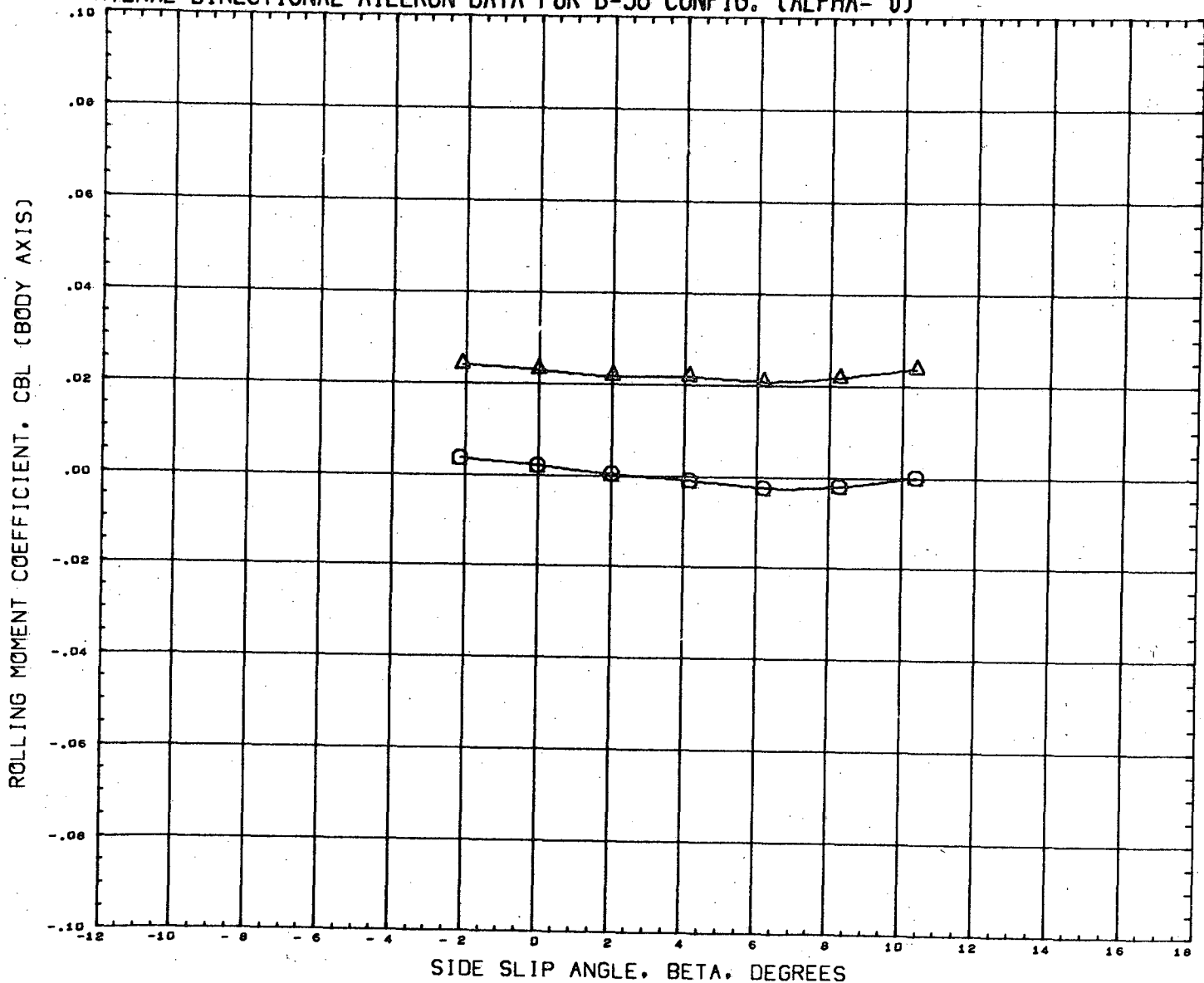
LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	AILRON	RUDDER	CANARD	REFERENCE INFORMATION	
(C35TDA)	MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=0 R=0	0.000		0.000	0.000	SREF	14.9040 SQ. IN.
(A35ADA)	MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=0 A=10	0.000	10.000	0.000	0.000	LREF	3.0120 IN.
						BREF	6.0180 IN.
						XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 4.959

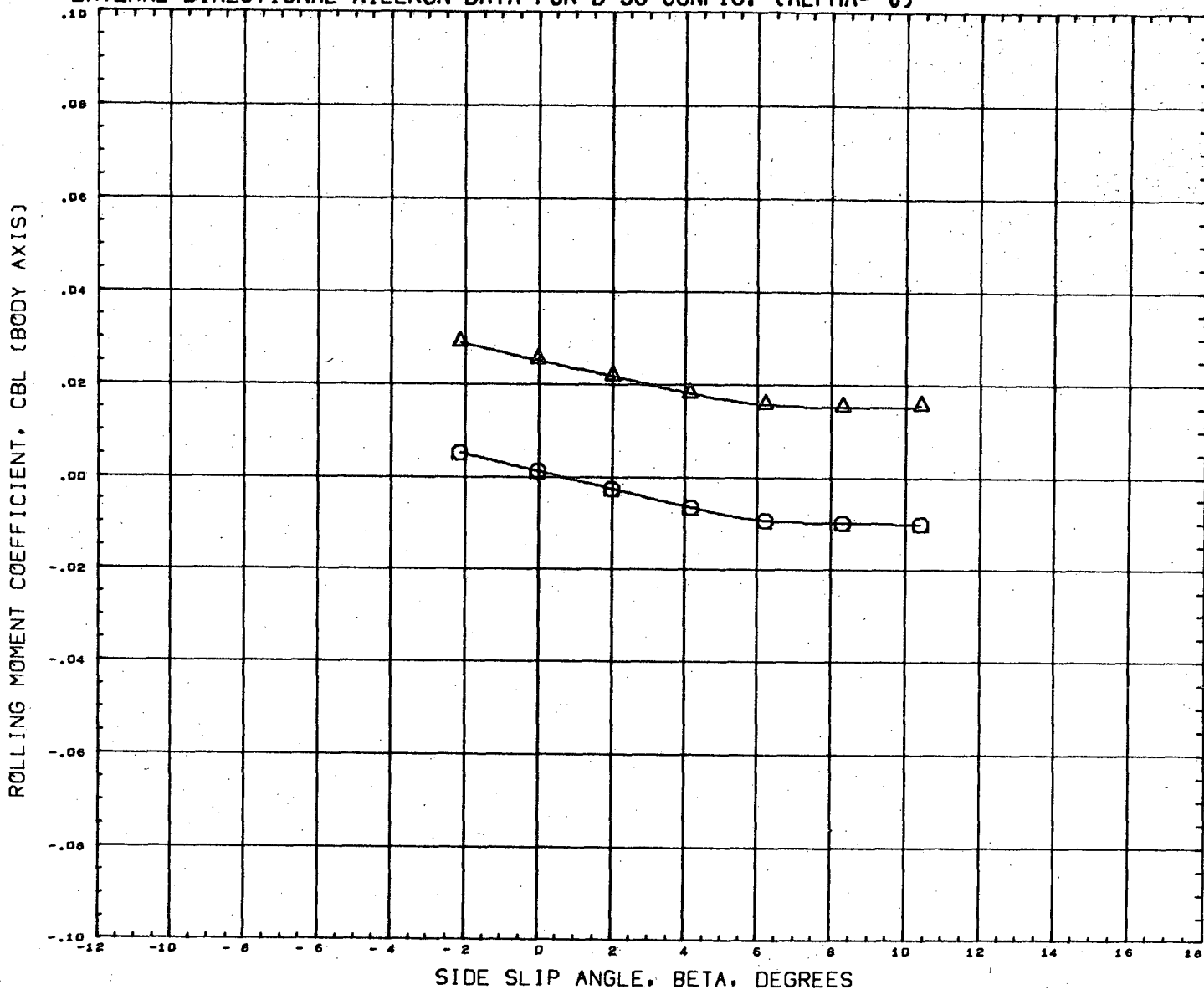
LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	AILRON	RUDDER	CANARD	REFERENCE INFORMATION
(C35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ.IN.
(A35ADA)	MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=0 A=10	0.000	10.000	0.000	0.000	LREF 3.0120 IN.
						BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 0.903

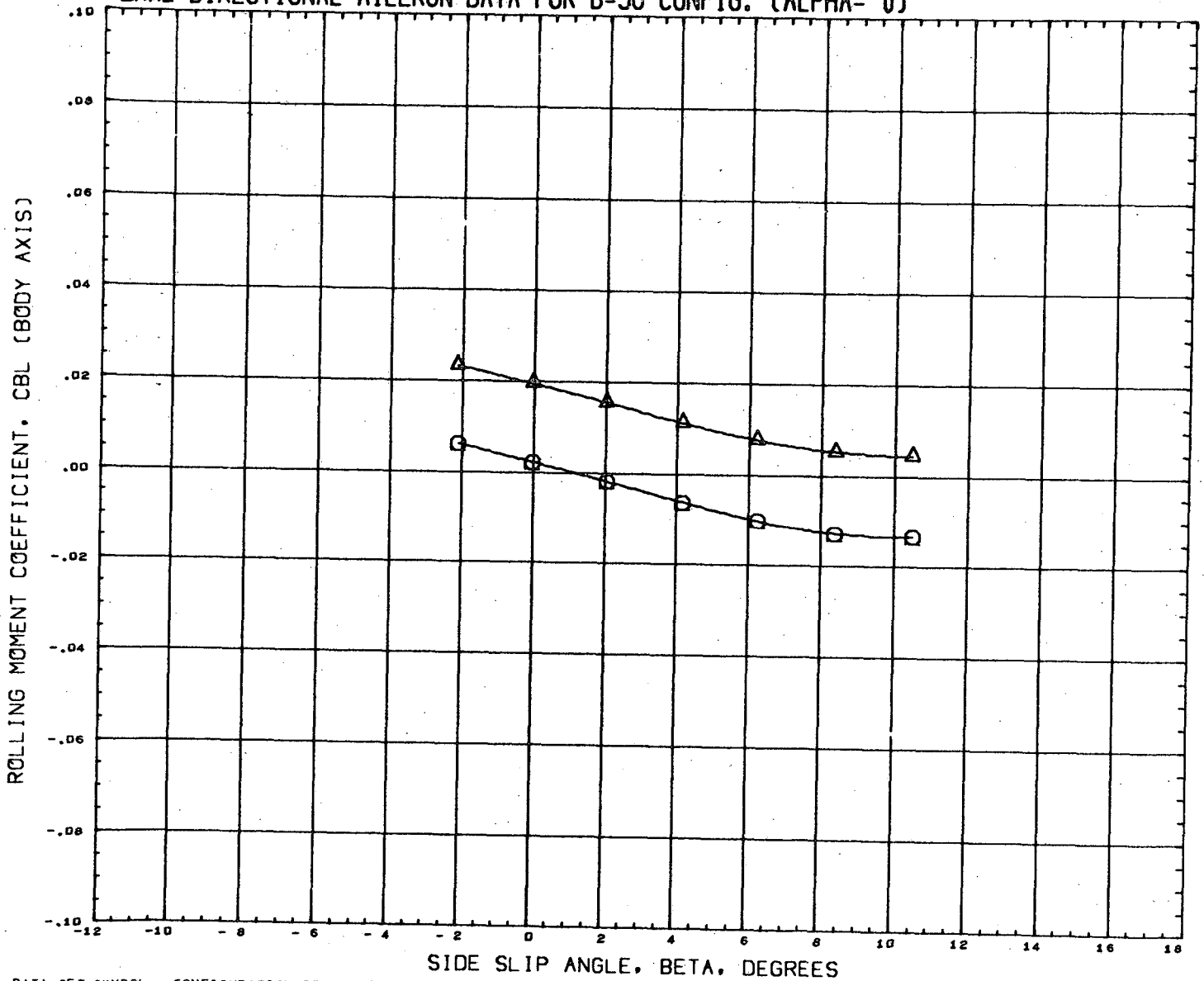
LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	AILRON	RUDDER	CANARD	REFERENCE INFORMATION	
(C35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=D R=D	0.000		0.000	0.000	SREF	14.9040 SQ. IN.
(A35ADA)	MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=D A=10	0.000	10.000	0.000	0.000	LREF	3.0120 IN.
						BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 0.996

LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

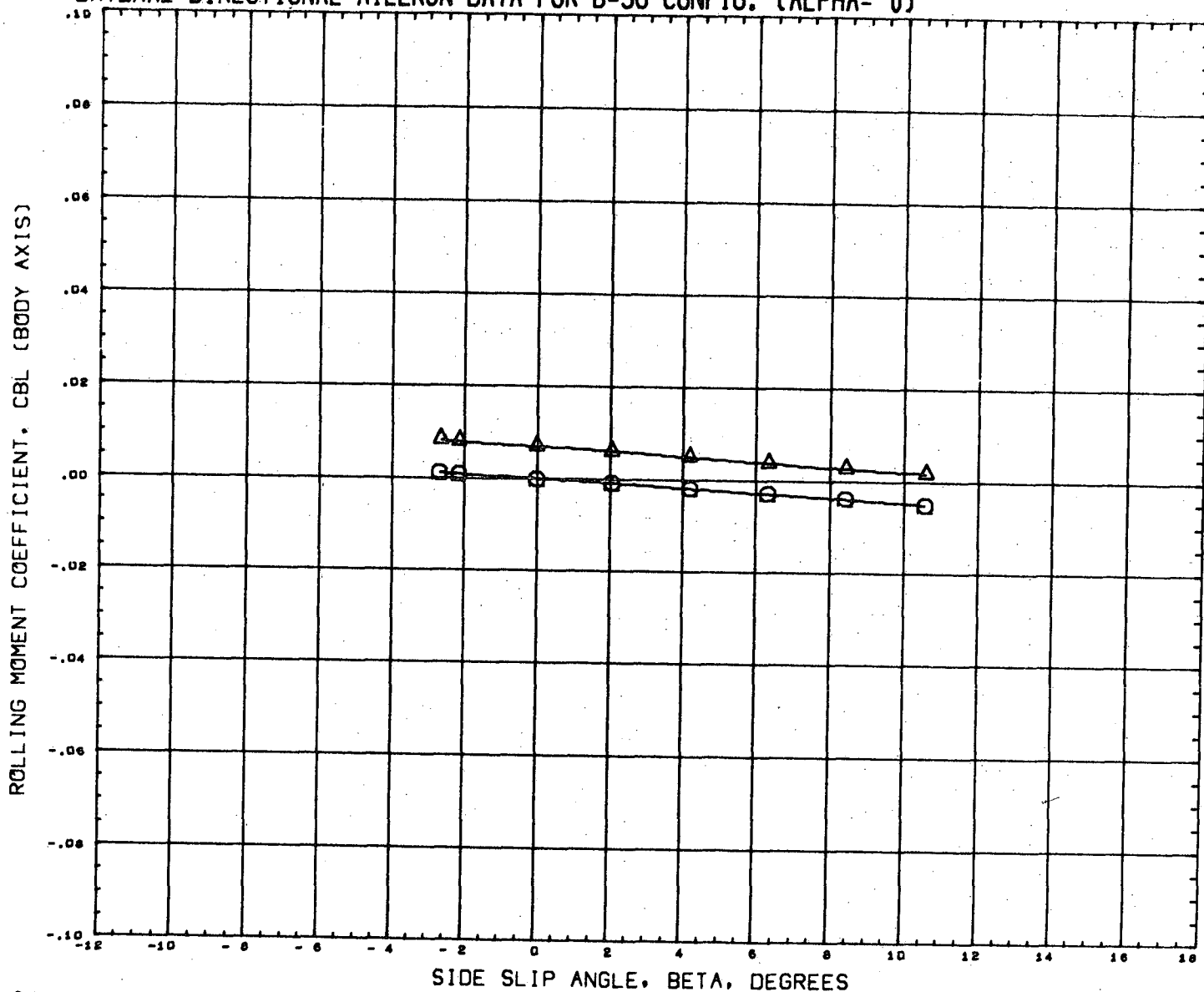
(C35TDA) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0
 (A35ADA) MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=0 A=10

ELEVON 0.000
 AILERON 10.000
 RUDDER 0.000
 CANARD 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 1.197

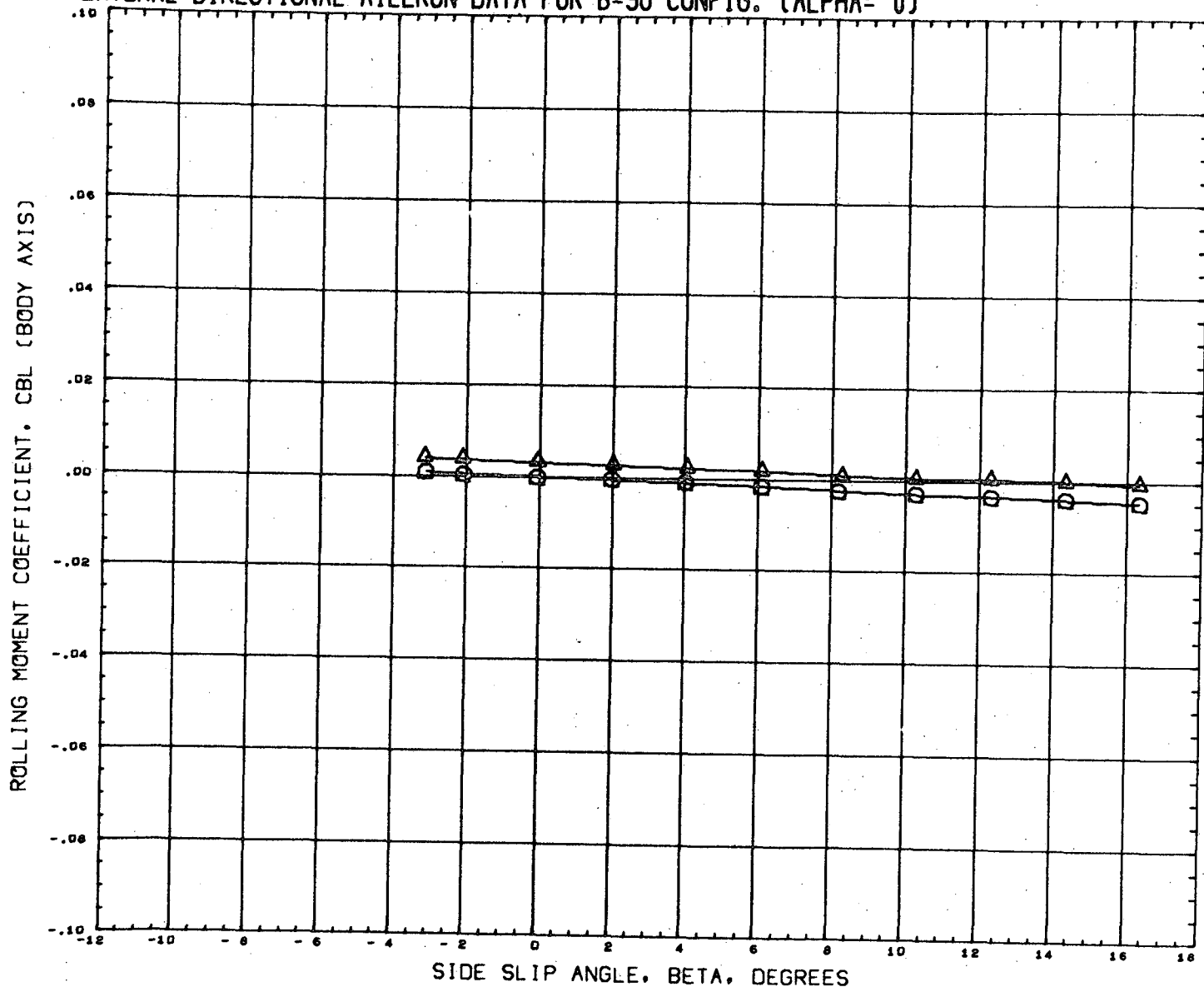
LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	AILRON	RUDDER	CANARD	REFERENCE INFORMATION
(C35TDA)	MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=D R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A35ADA)	MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=D A=10	0.000	10.000	0.000	0.000	LREF 3.0120 IN.
						BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 1.950

LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C35TDA)	MSFC TWT-493 GD/C	B25W19CBV1D	ALPHA=0 C=0 R=0
(A35ADA)	MSFC TWT-493 GD/C	B25W19CBV1D	ALPHA=0 C=0 A=10

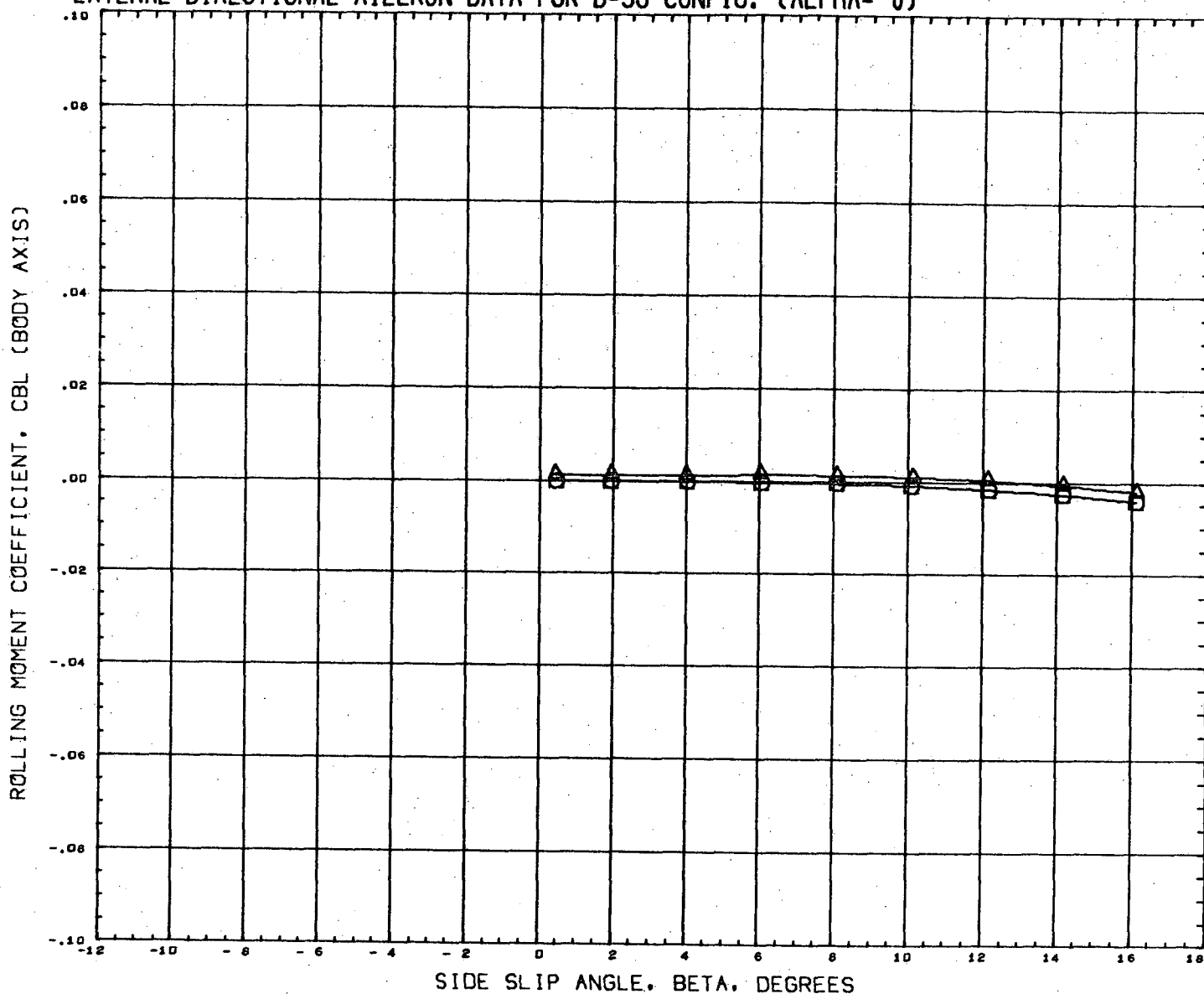
ELEVON	AILRON	RUDDER	CANARD
0.000	0.000	0.000	0.000
0.000	10.000	0.000	0.000

REFERENCE INFORMATION

SREF	14.9040	sq. in.
LREF	3.0120	in.
BREF	6.0180	in.
XMRP	7.2990	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0035	

MACH 2.990

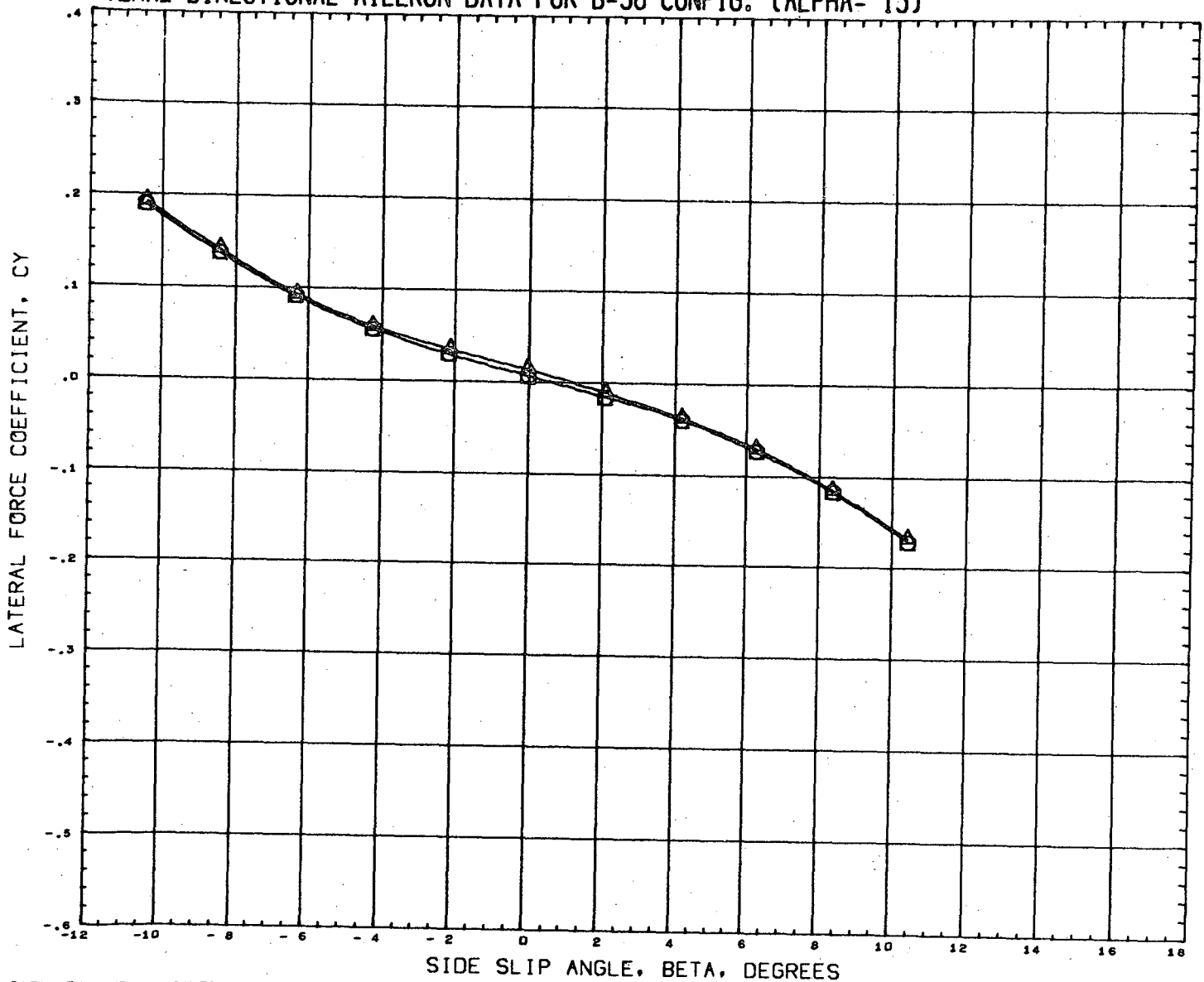
LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 0)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	AILRON	RUDDER	CANARD	REFERENCE INFORMATION	
(C35TDA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=0 C=0 R=0	0.000		0.000	0.000	SREF	14.9040 sq. in.
(A35ADA)	MSFC TWT-493 GD/C B25W19CBV10 ALPHA=0 C=0 A=10	0.000	10.000	0.000	0.000	LREF	3.0120 in.
						BREF	6.0180 in.
						XMRP	7.2990 in.
						YMRP	0.0000 in.
						ZMRP	0.0000 in.
						SCALE	0.0035

MACH 4.959

LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B33TCC) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D R=D
 (A33ACA) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D A=10

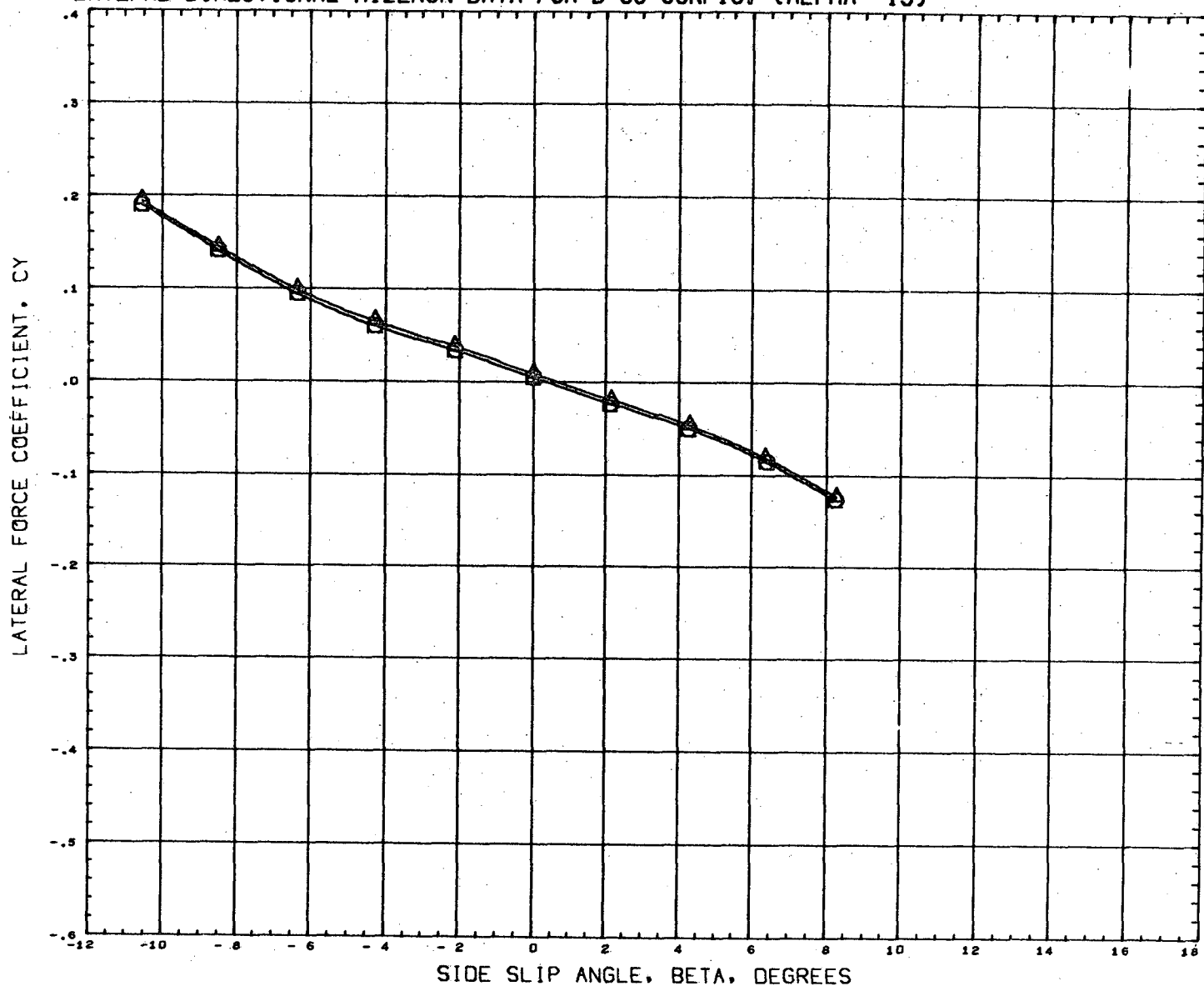
ELEVON	AILRON	RUDDER	CANARD
0.000	0.000	0.000	0.000
0.000	10.000	0.000	0.000

REFERENCE INFORMATION

SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MACH 1.189

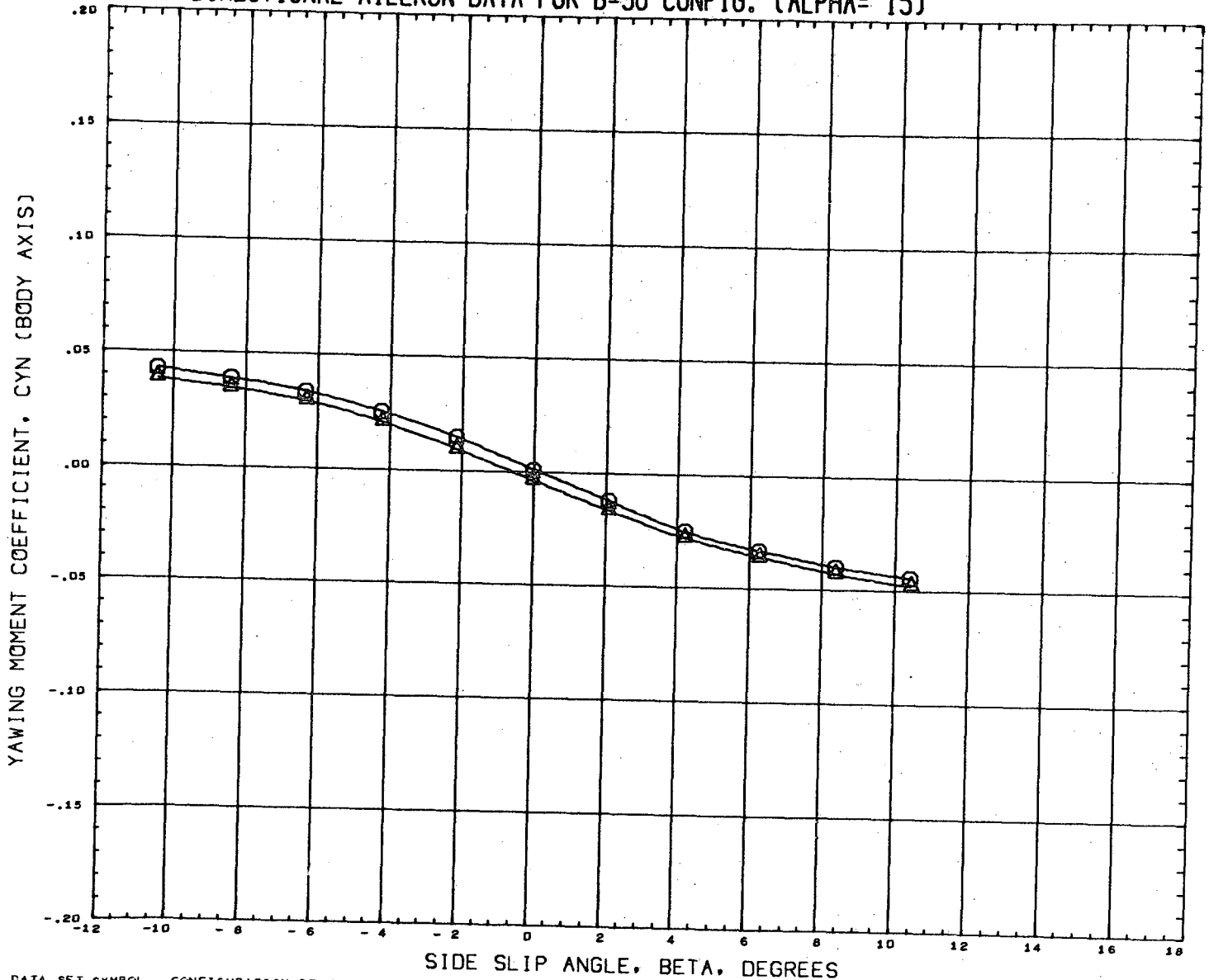
LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	AILRON	RUDDER	CANARD	REFERENCE INFORMATION	
(B35TCC)	MSFC TWT-493 GD/C B25W19C8V1D ALPHA=15 C=D R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A35ACA)	MSFC TWT-493 GD/C B25W19C8V1D ALPHA=15 C=D A=10	0.000	10.000	0.000	0.000	LREF	3.0120 IN.
						BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.963

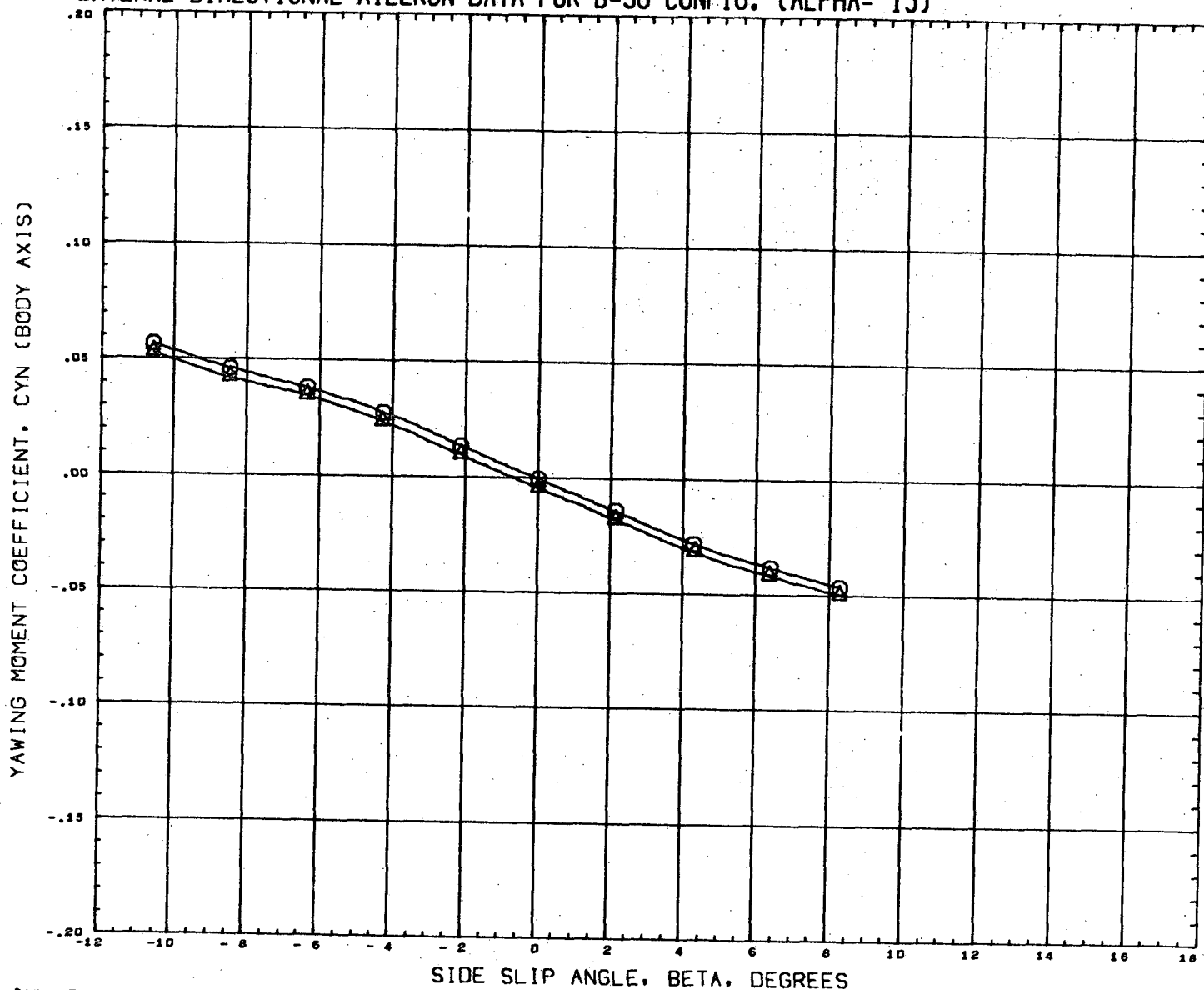
LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	AILRON	RUDDER	CANARD	REFERENCE INFORMATION
(B35TCC)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D R=0	0.000		0.000	0.000	SREF 14.9040 SQ.IN.
(A35ACA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D A=10	0.000	10.000	0.000	0.000	LREF 3.0120 IN.
						BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 1.189

LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B357CC) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D R=0
 (A355AC) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D A=10

ELEVON

AILRON

RUDDER

CANARD

REFERENCE INFORMATION

0.000

0.000

0.000

0.000

SREF 14.9040 50. IN.

LREF 3.0120 IN.

BREF 6.0180 IN.

XMRF 7.2990 IN.

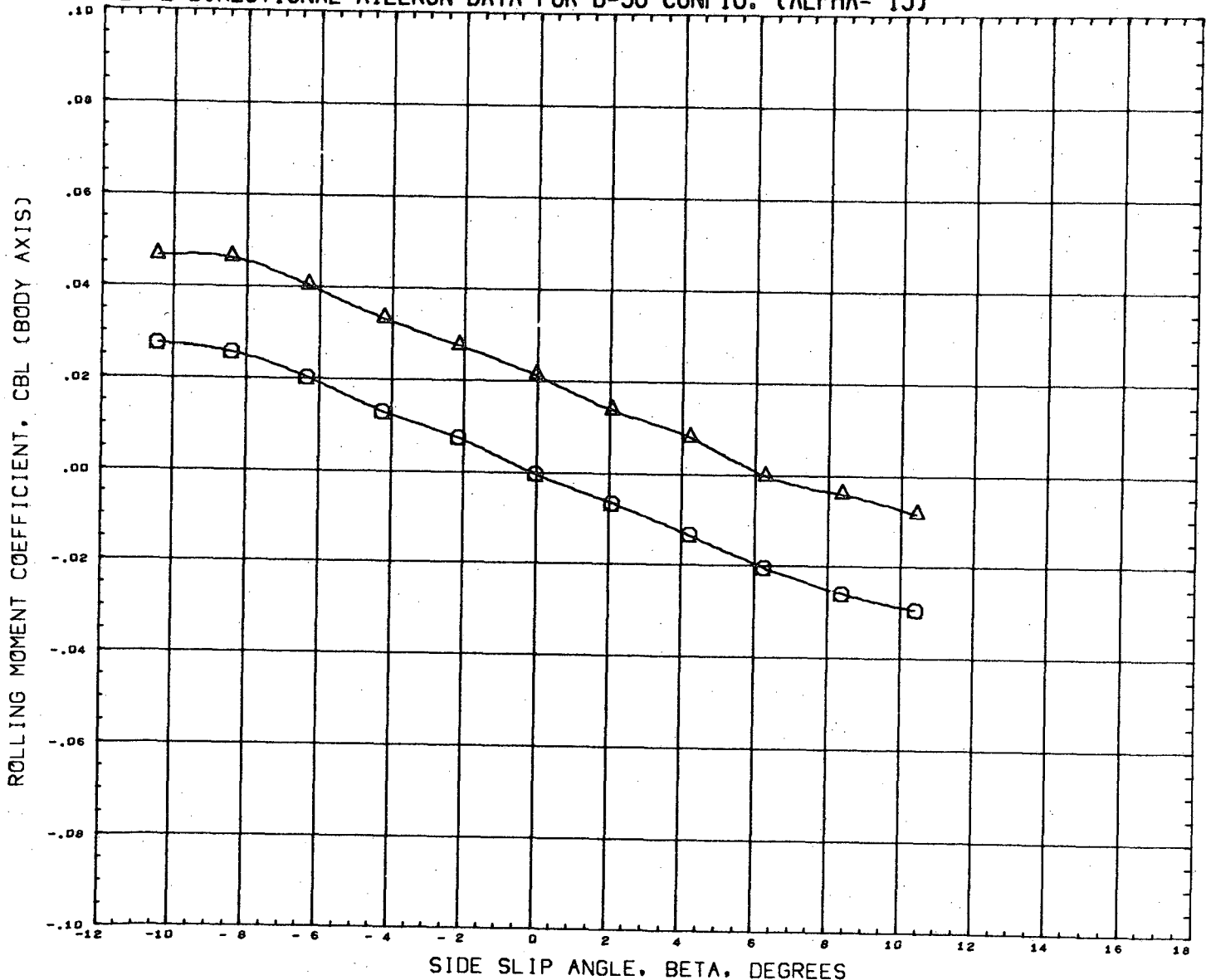
YMRF 0.0000 IN.

ZMRF 0.0000 IN.

SCALE 0.0035

MACH 1.963

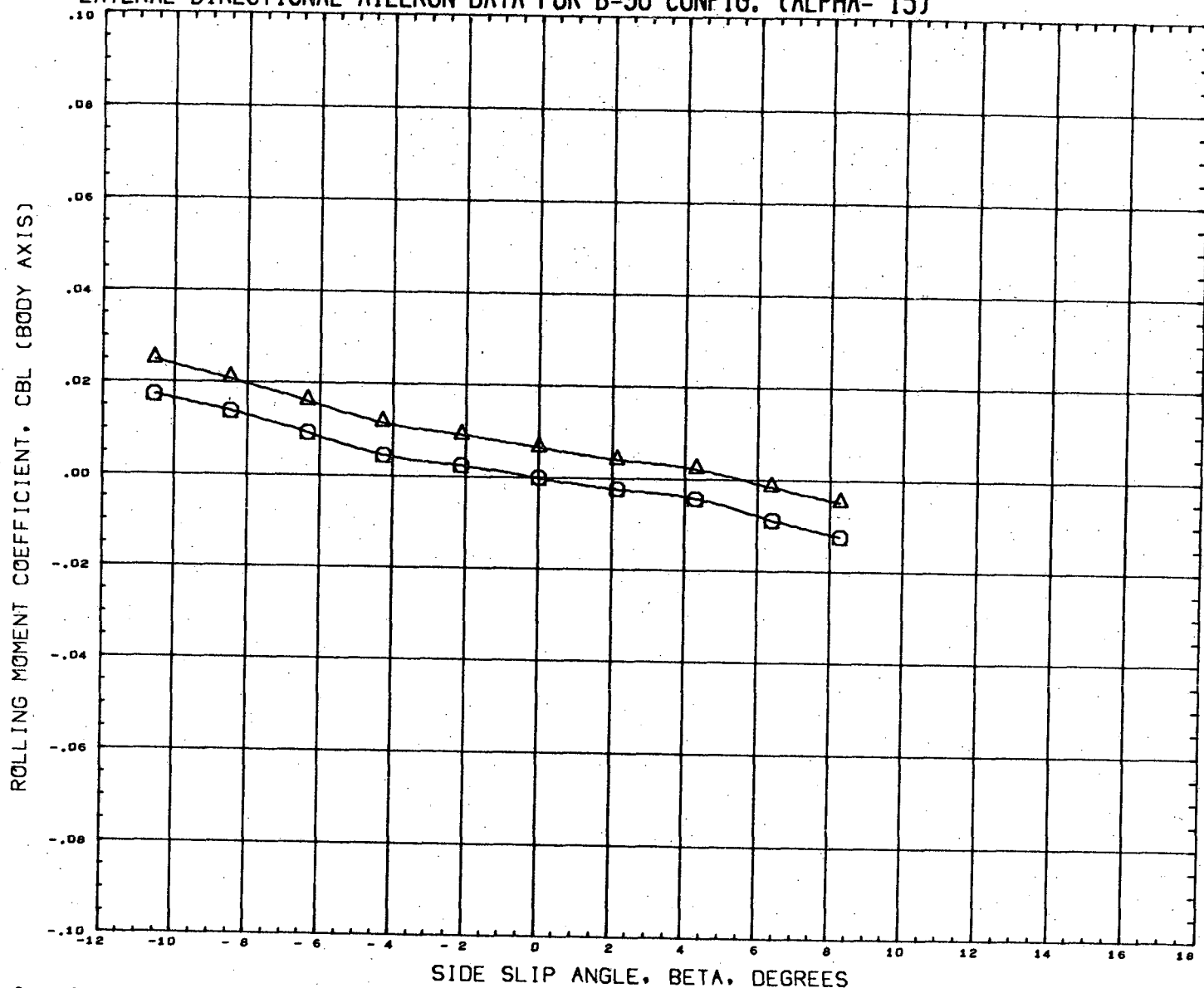
LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	AILRON	RUDDER	CANARD	REFERENCE INFORMATION	
(B35TCC)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=0 R=0	0.000		0.000	0.000	SREF	14.9040 SQ.IN.
(A35ACA)	MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=0 A=10	0.000	10.000	0.000	0.000	LREF	3.0120 IN.
						BREF	6.0180 IN.
						XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 1.189

LATERAL-DIRECTIONAL AILERON DATA FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

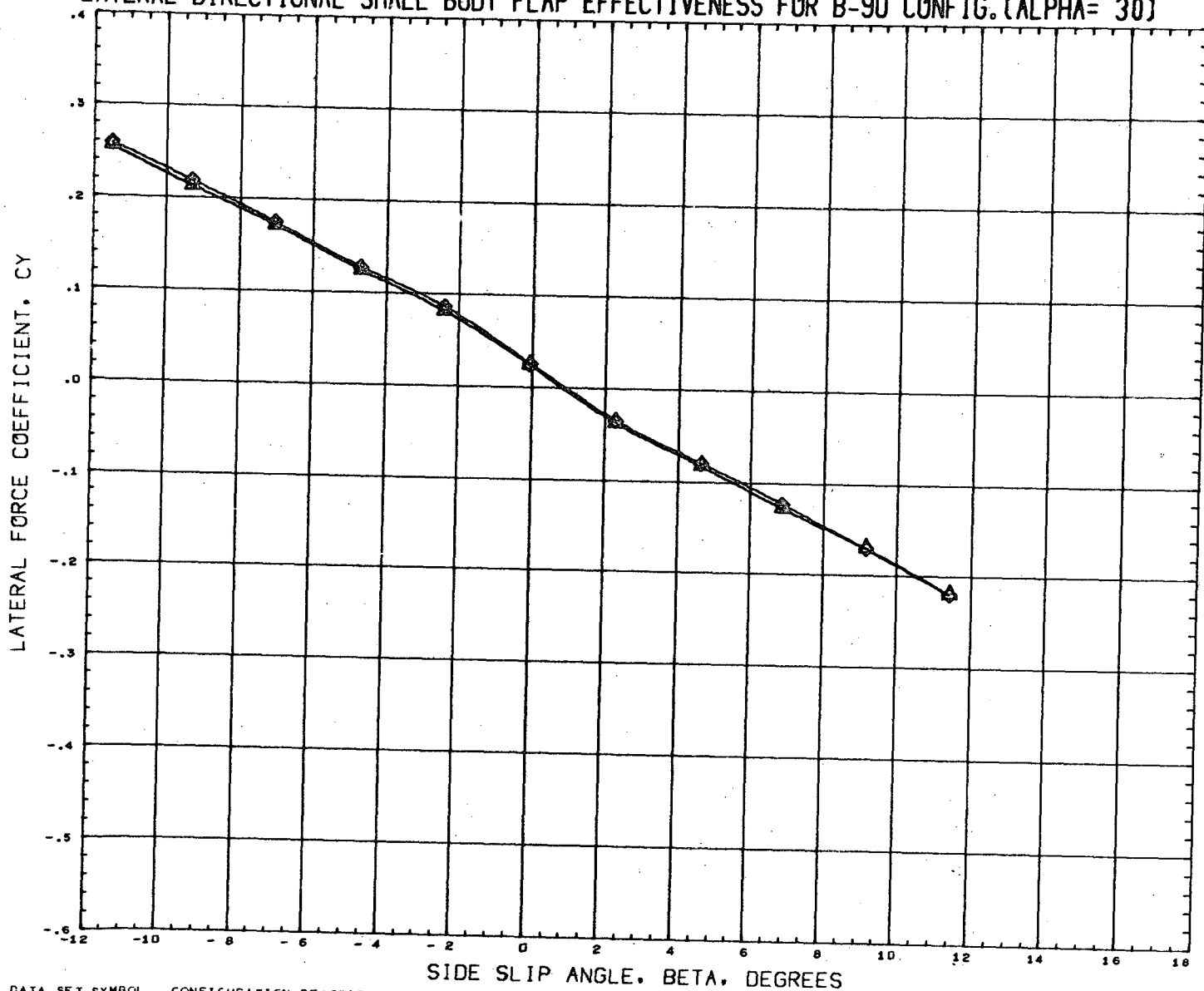
(B35TCC) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D R=0
 (A35ACA) MSFC TWT-493 GD/C B25W19C8V10 ALPHA=15 C=D A=10

ELEVON AILRON RUDDER CANARD
 0.000 10.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0160 IN.
 XMRF 7.2990 IN.
 YMRF 0.0000 IN.
 ZMRF 0.0000 IN.
 SCALE 0.0035

MACH 1.963

LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B350CA) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (A35FCA) MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=40
 (A35FCC) MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=60

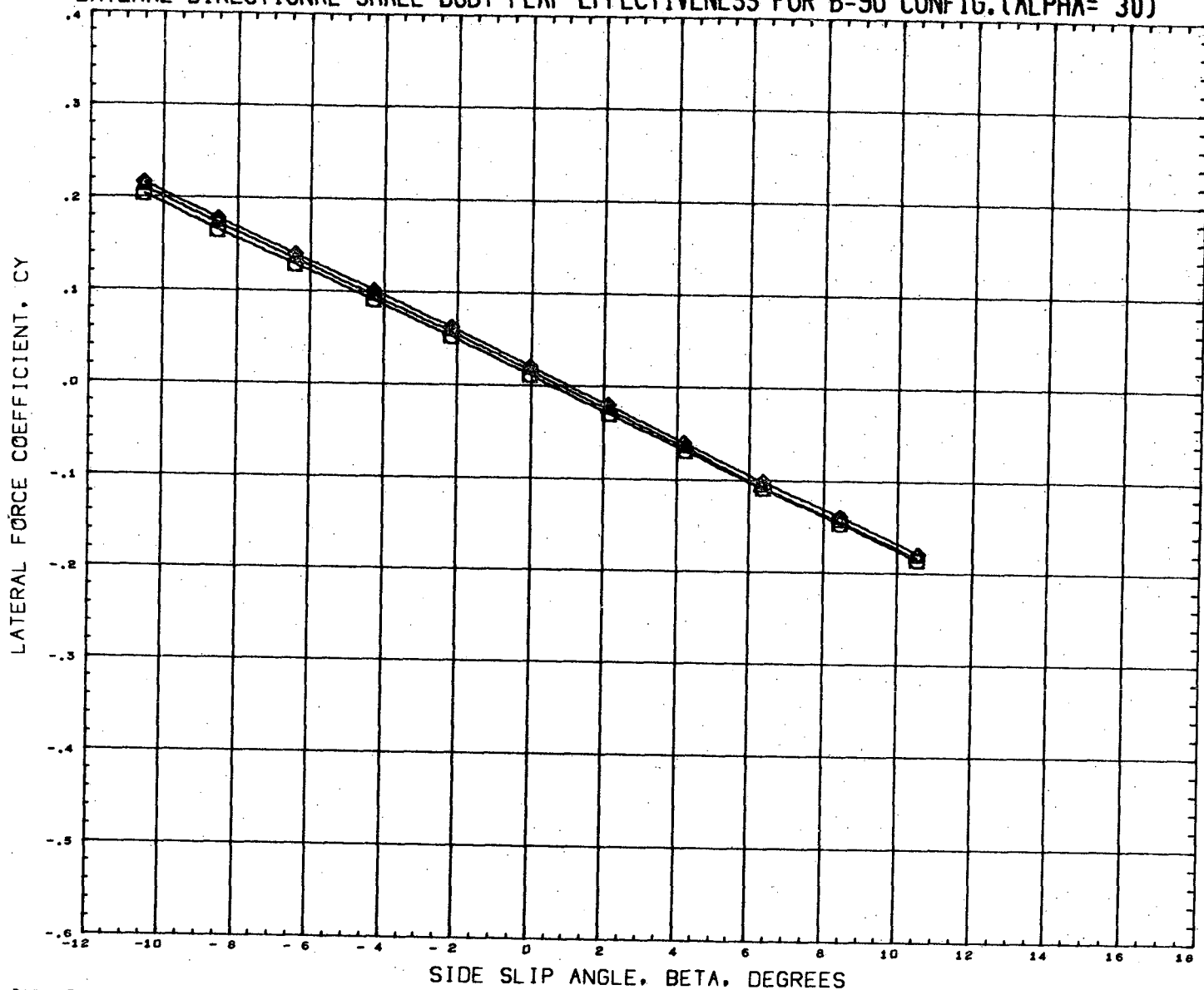
ALPHA	B-FLAP	ELEVON	CANARD
30.000		0.000	0.000
30.000	40.000	0.000	0.000
30.000	60.000	0.000	0.000

REFERENCE INFORMATION

SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

MACH 1.972

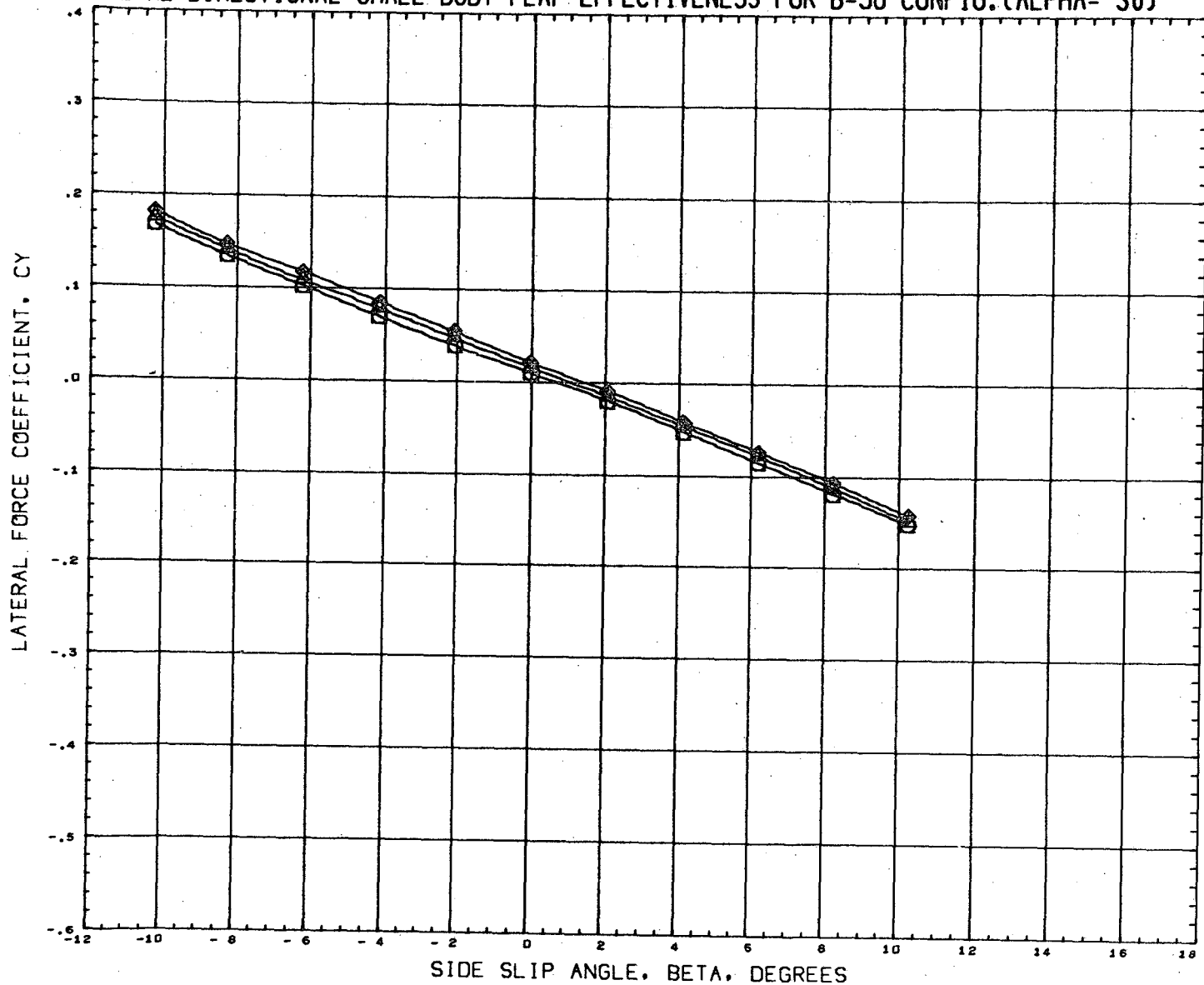
LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(B35OCA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=D R=D	30.000		0.000	0.000	SREF 14.9040 SQ. IN.
(A35FCA)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=D F=40	30.000	40.000	0.000	0.000	LREF 3.0120 IN.
(A35FCC)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=D F=60	30.000	60.000	0.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 2.990

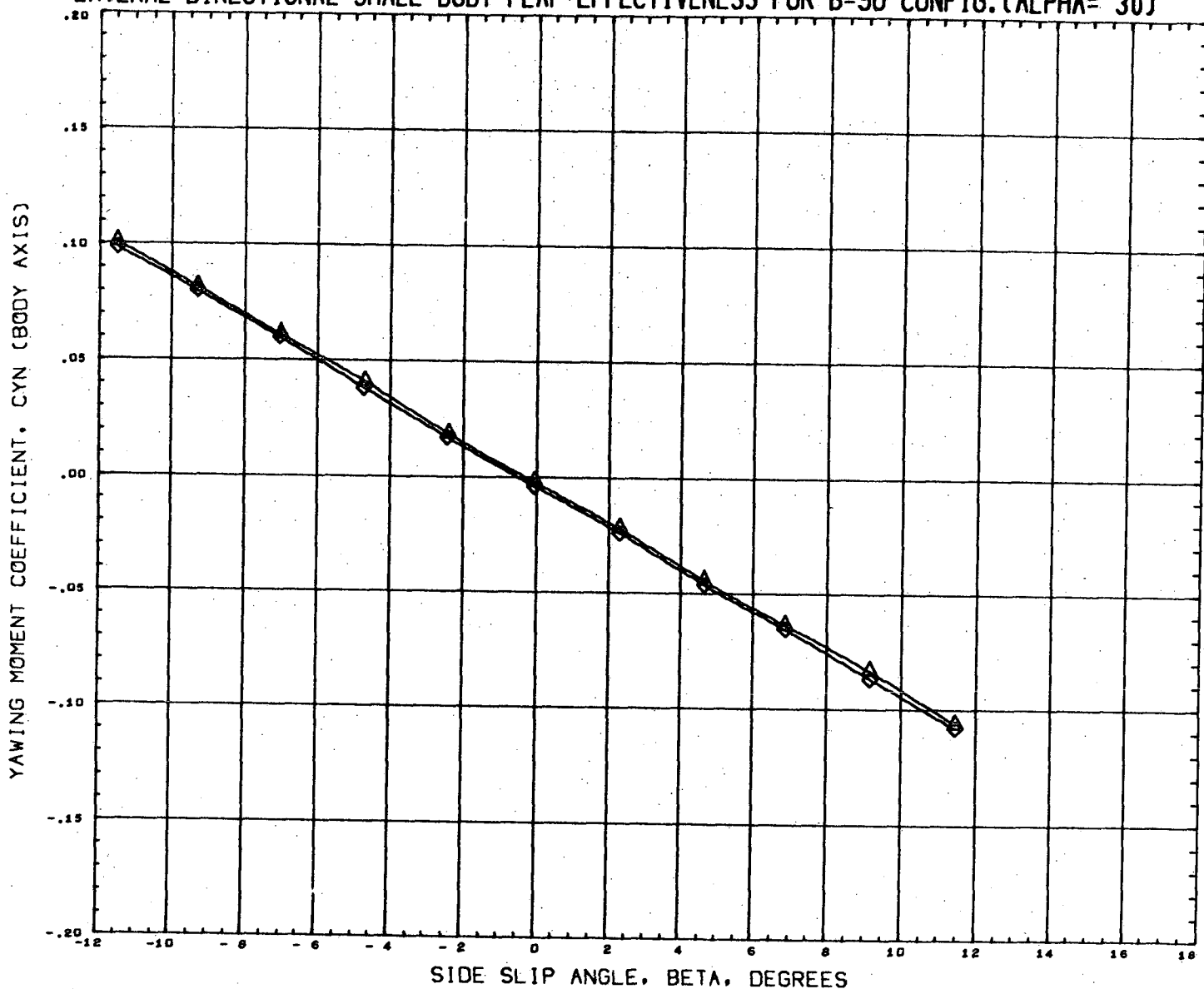
LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(B350CA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=D R=0	30.000		0.000	0.000	SREF 14.9040 SQ.IN.
(A35FCA)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=D F=40	30.000	40.000	0.000	0.000	LREF 3.0120 IN.
(A35FCC)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=D F=60	30.000	60.000	0.000	0.000	BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 4.959

LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG.(ALPHA= 30)



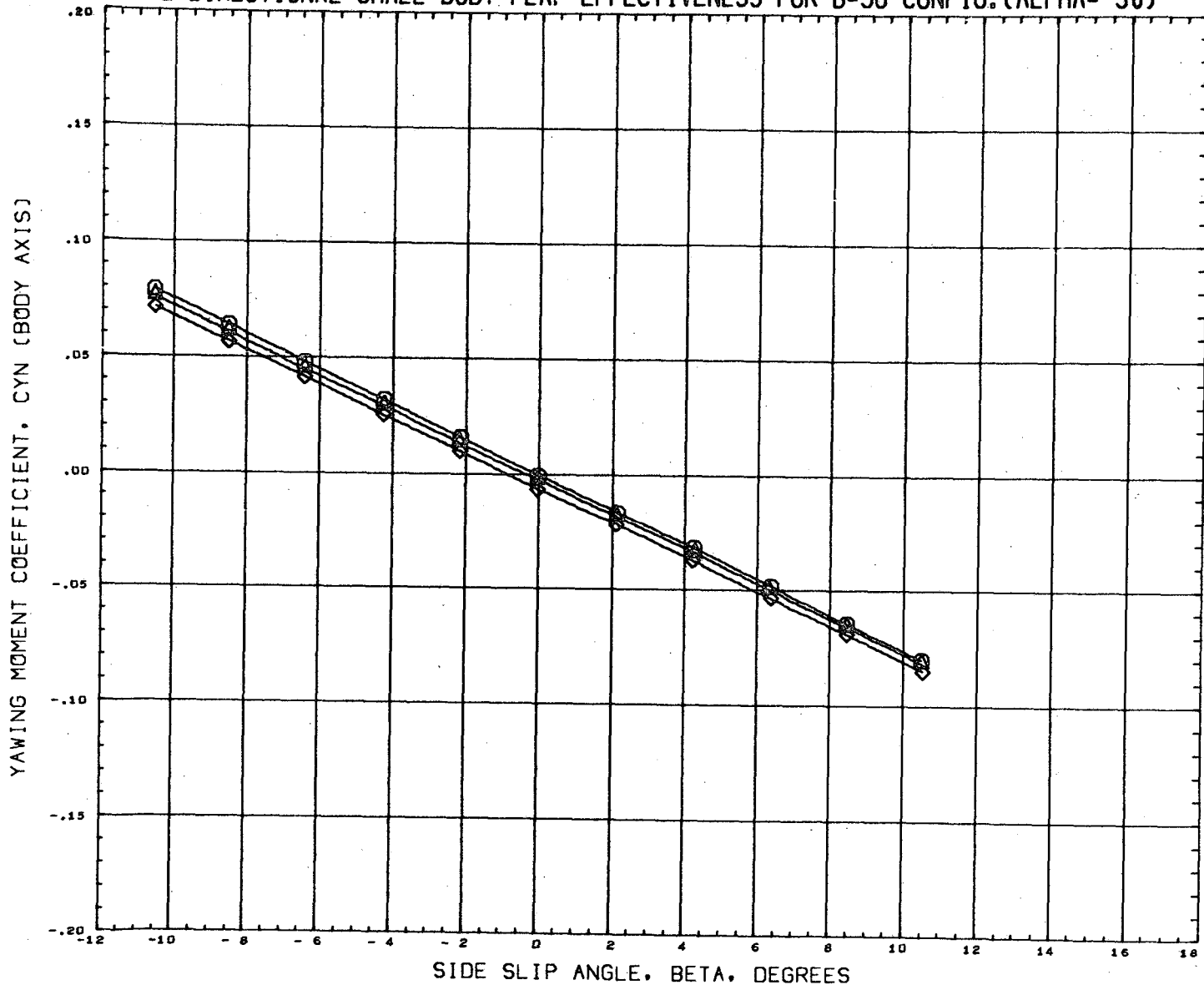
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B35OCA) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (A35FCA) MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=40
 (A35FCC) MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=60

ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
30.000	0.000	0.000	0.000	SREF 14.9040 SQ.IN.
30.000	40.000	0.000	0.000	LREF 3.0120 IN.
30.000	60.000	0.000	0.000	BREF 6.0180 IN.
				XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

MACH 1.972

LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

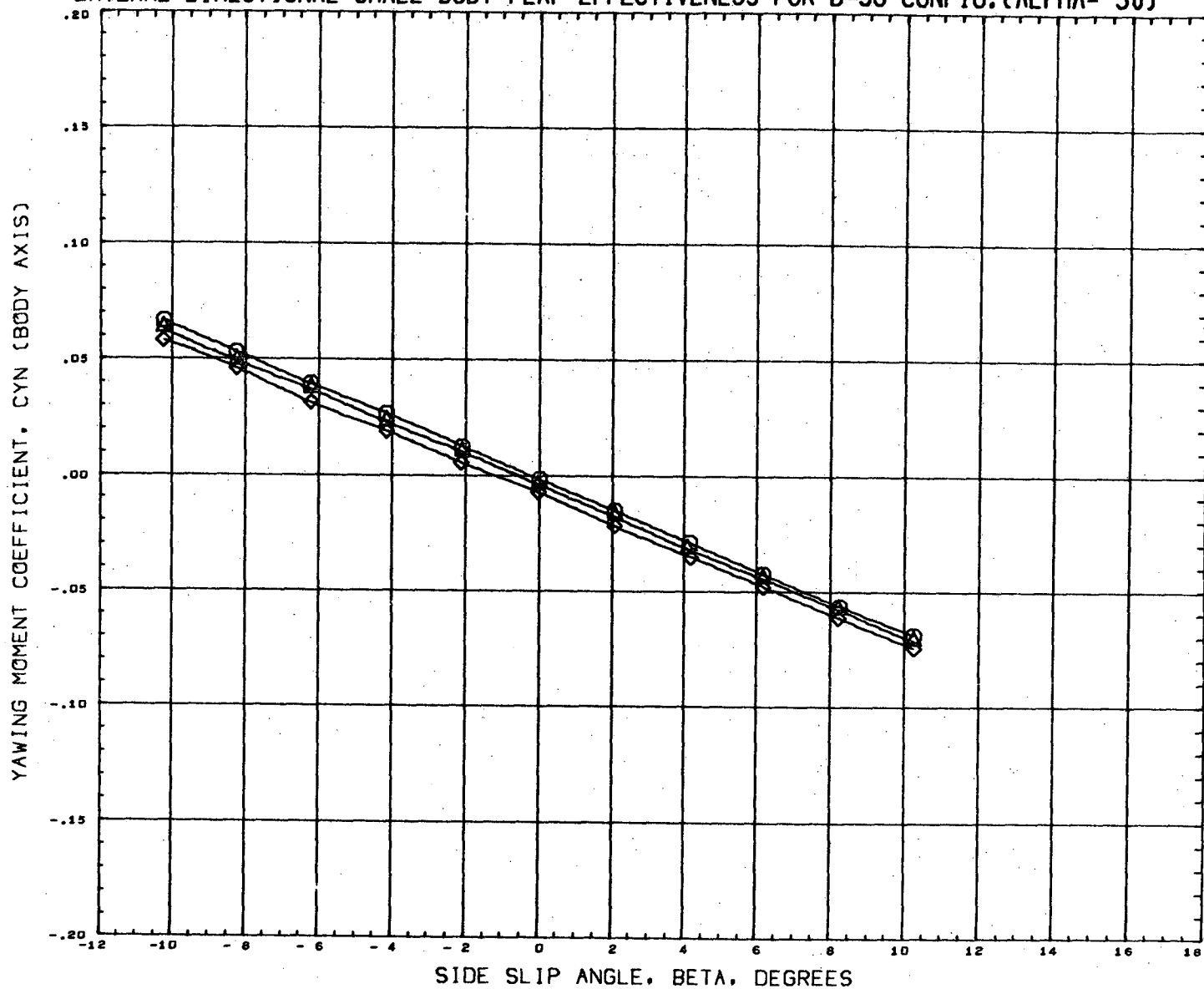
(B350CA) MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=0 R=0
 (A35FCA) MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=40
 (A35FCC) MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=60

ALPHA B-FLAP ELEVON CANARD
 30.000 0.000 0.000 0.000
 30.000 40.000 0.000 0.000
 30.000 60.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 2.990

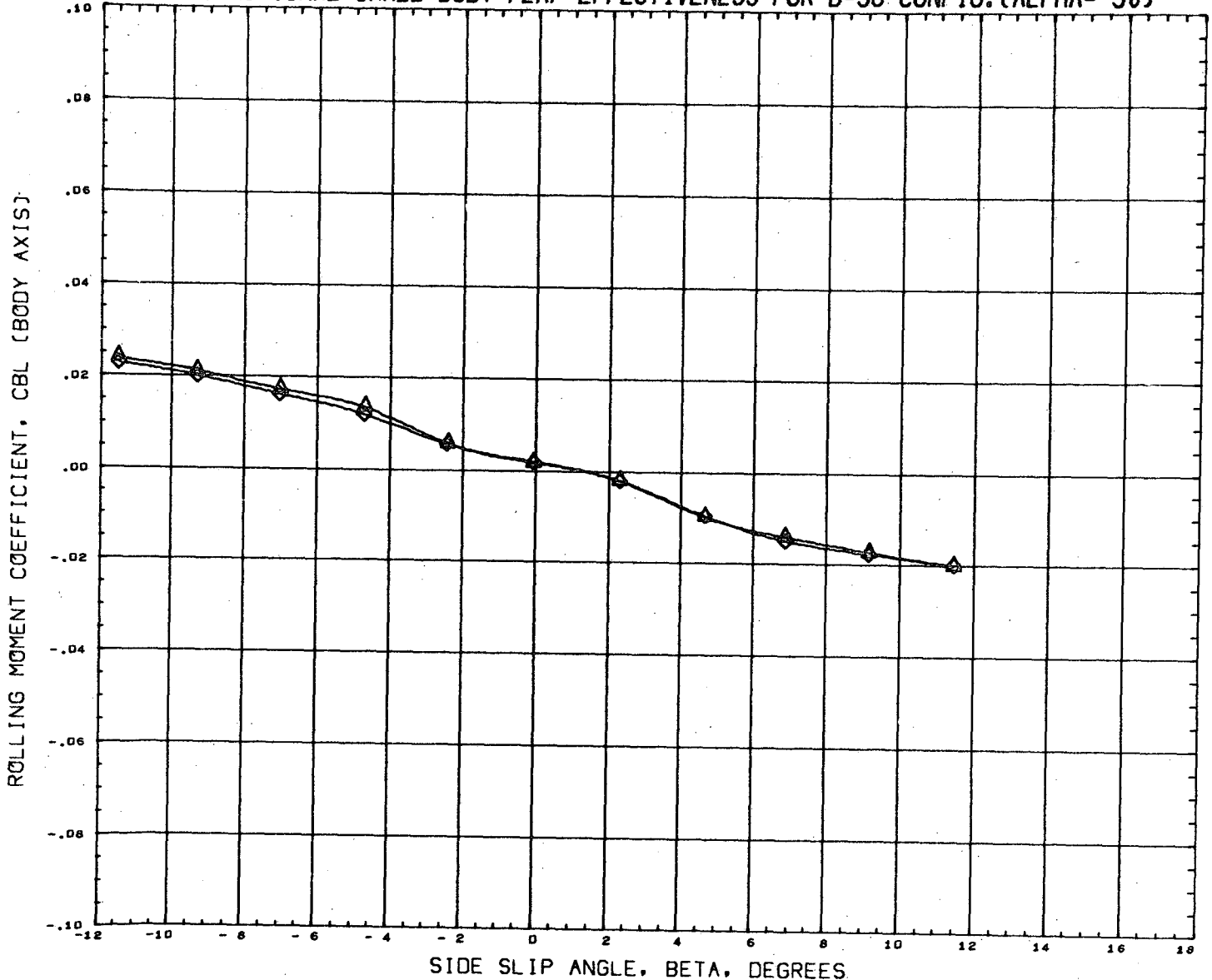
LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG.(ALPHA= 30)



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(B350CA)	○	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=0 R=0	30.000		0.000	0.000	SRÉF 14.9040 99.IN.
(A35FCA)	△	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=40	30.000	40.000	0.000	0.000	LRÉF 3.0120 IN.
(A35FCC)	◇	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=60	30.000	60.000	0.000	0.000	BRÉF 6.0180 IN.
							XMRP 7.2990 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0035

MACH 4.959

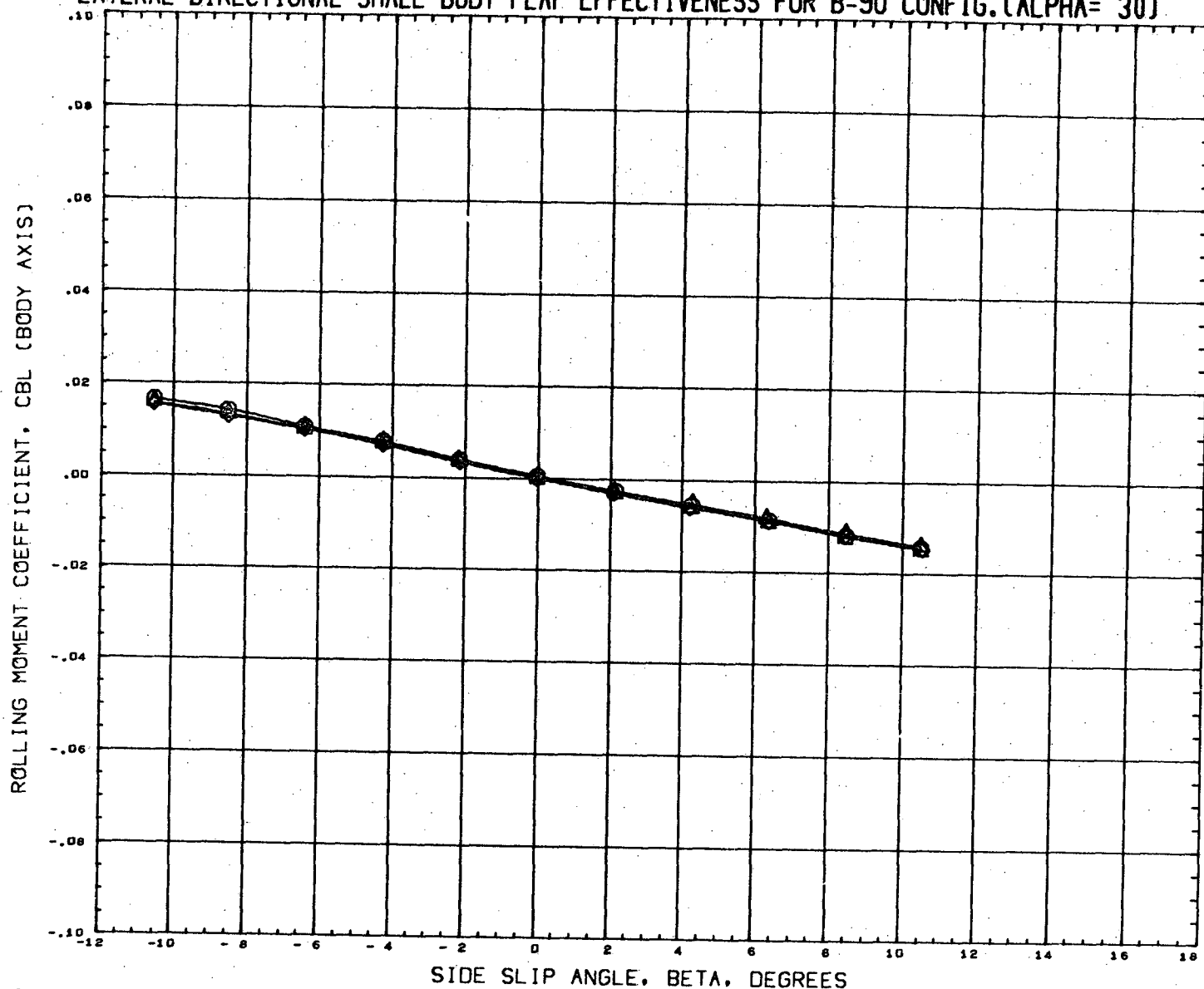
LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(B350CA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000		0.000	0.000	SREF 14.9040 SQ. IN.
(A35FCA)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=40	30.000	40.000	0.000	0.000	LREF 3.0120 IN.
(A35FCC)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=60	30.000	60.000	0.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.972

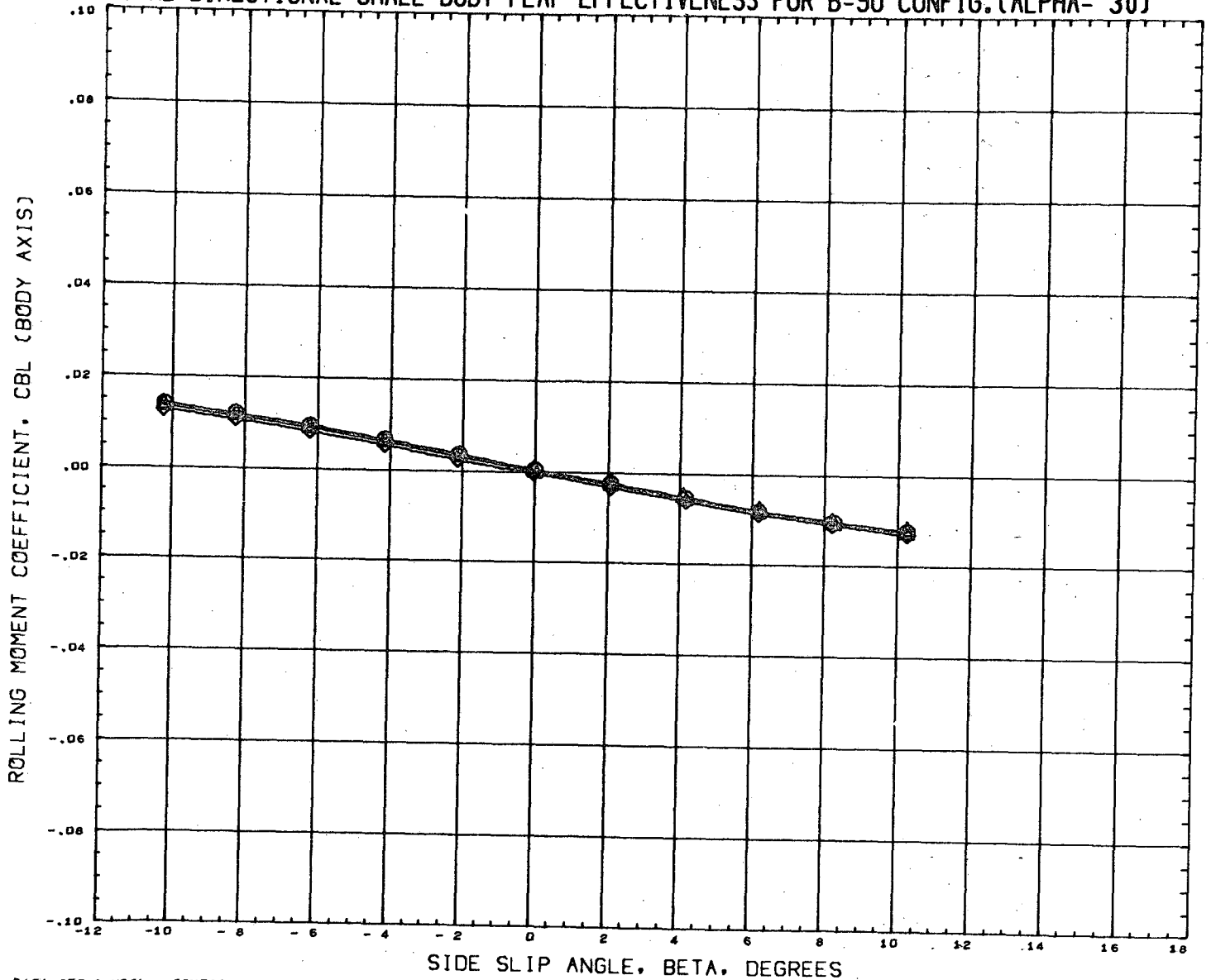
LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(B350CA)	MSFC TWT-493 GD/C B25W19C9 ALPHA=30 C=0 R=0	30,000		0,000	0,000	SREF 14.9040 SQ.IN.
(A35FCA)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=40	30,000	40,000	0,000	0,000	LREF 3.0120 IN.
(A35FCC)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=60	30,000	60,000	0,000	0,000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 2.990

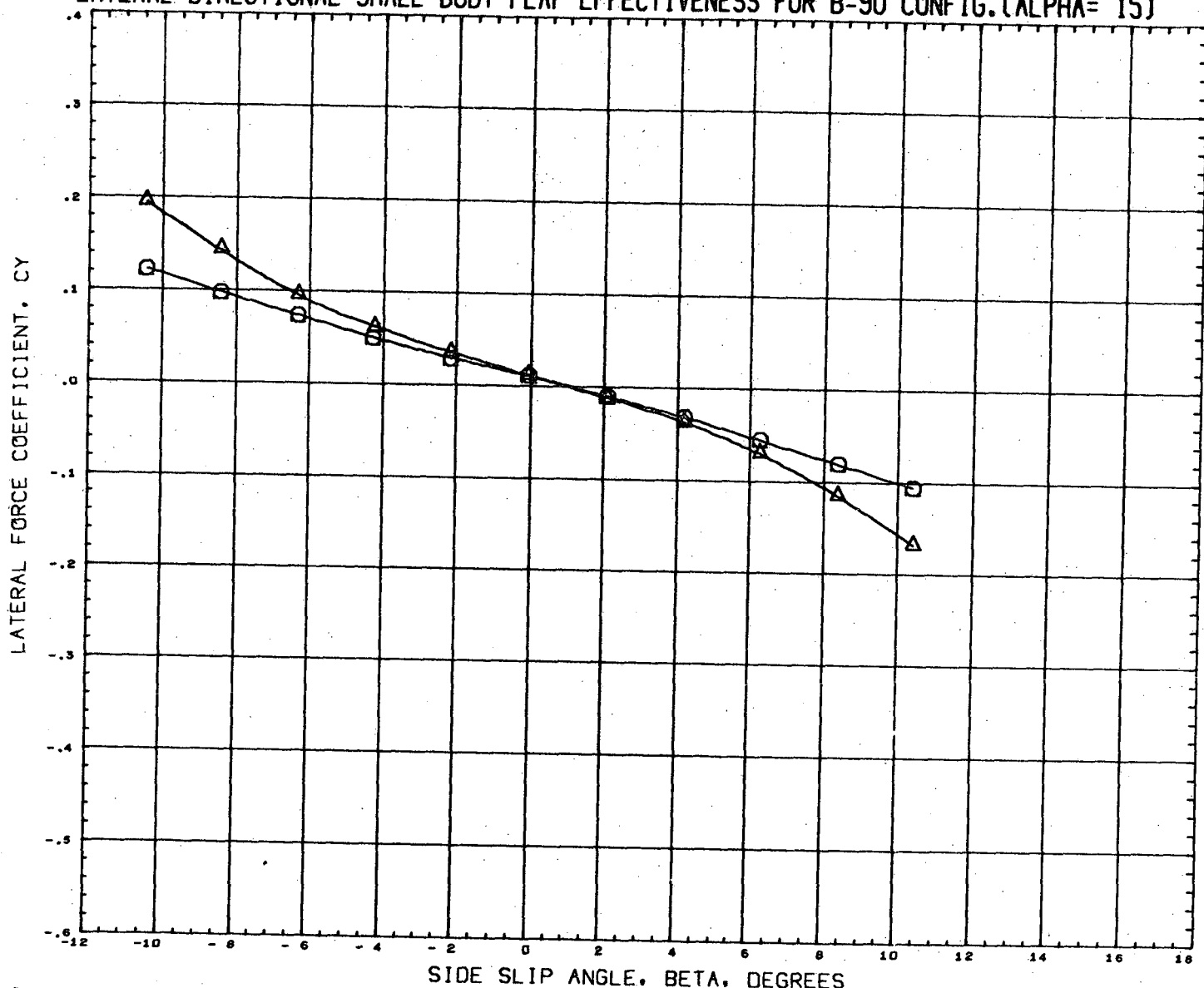
LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG.(ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(B350CA)	MSFC TWT-493 GD/C B25W19C8	ALPHA=30 C=D R=0	30.000	0.000	0.000	SREF 14.9040 SQ.IN.
(A35FCA)	MSFC TWT-493 GD/C B25W19C8F7	ALPHA=30 C=D F=40	30.000	40.000	0.000	LREF 3.0120 IN.
(A35FCC)	MSFC TWT-493 GD/C B25W19C8F7	ALPHA=30 C=D F=60	30.000	60.000	0.000	BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 4.959

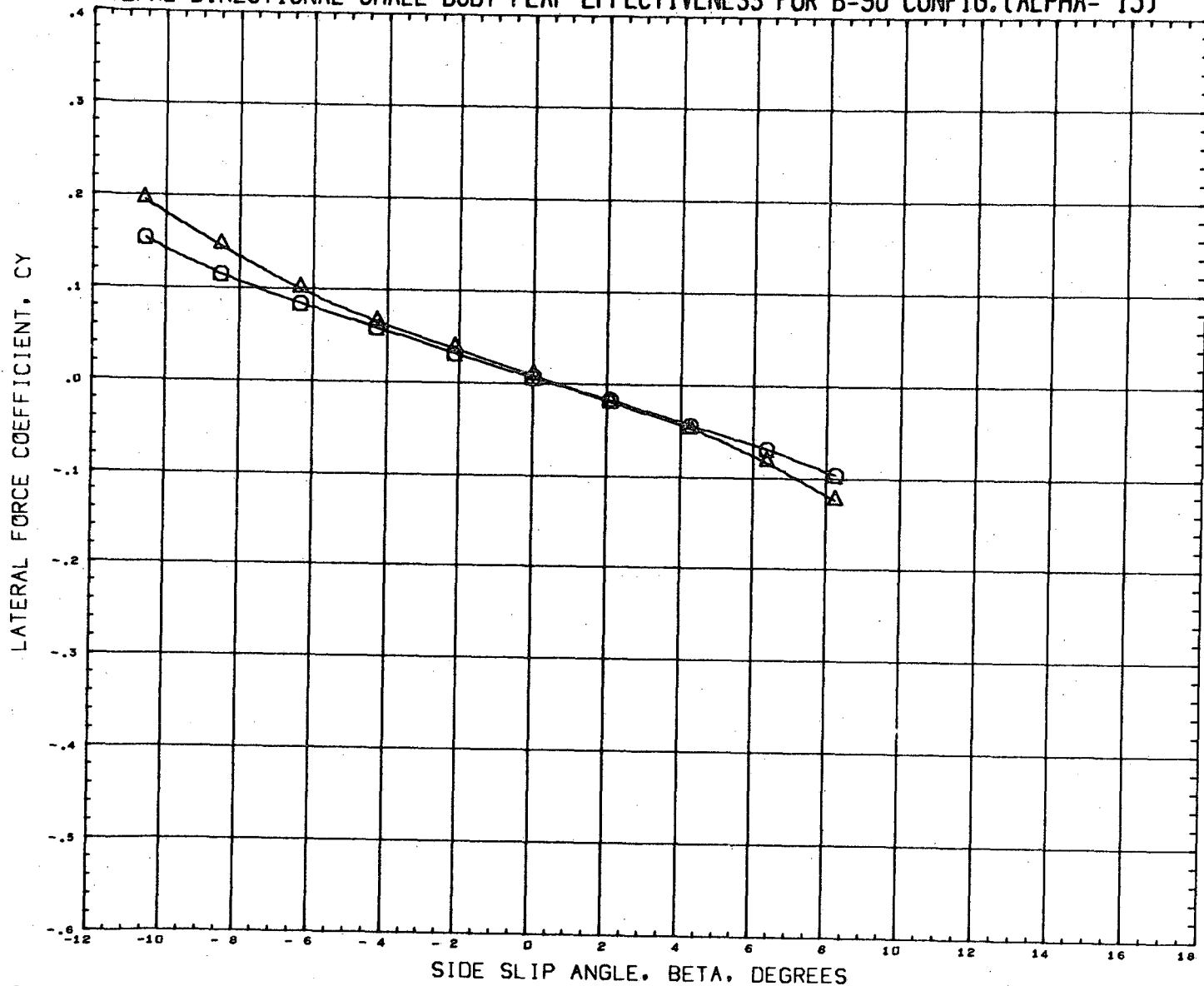
LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG.(ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(B35OCC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=DF	15.000	0.000	0.000	SREF 14.9040 50.IN.
(A35FCB)	MSFC TWT-493 GD/C B25W19C8F7	ALPHA=15 C=0 F=40	15.000	40.000	0.000	LREF 3.0120 IN.
						BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 1.192

LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B350CC) MSFC TWT-493 GD/C B25W19C8
(A35FCB) MSFC TWT-493 GD/C B25W19C8F7

ALPHA=15 C=DR=DF
ALPHA=15 C=D F=40

ALPHA
15.000
15.000

B-FLAP
40.000

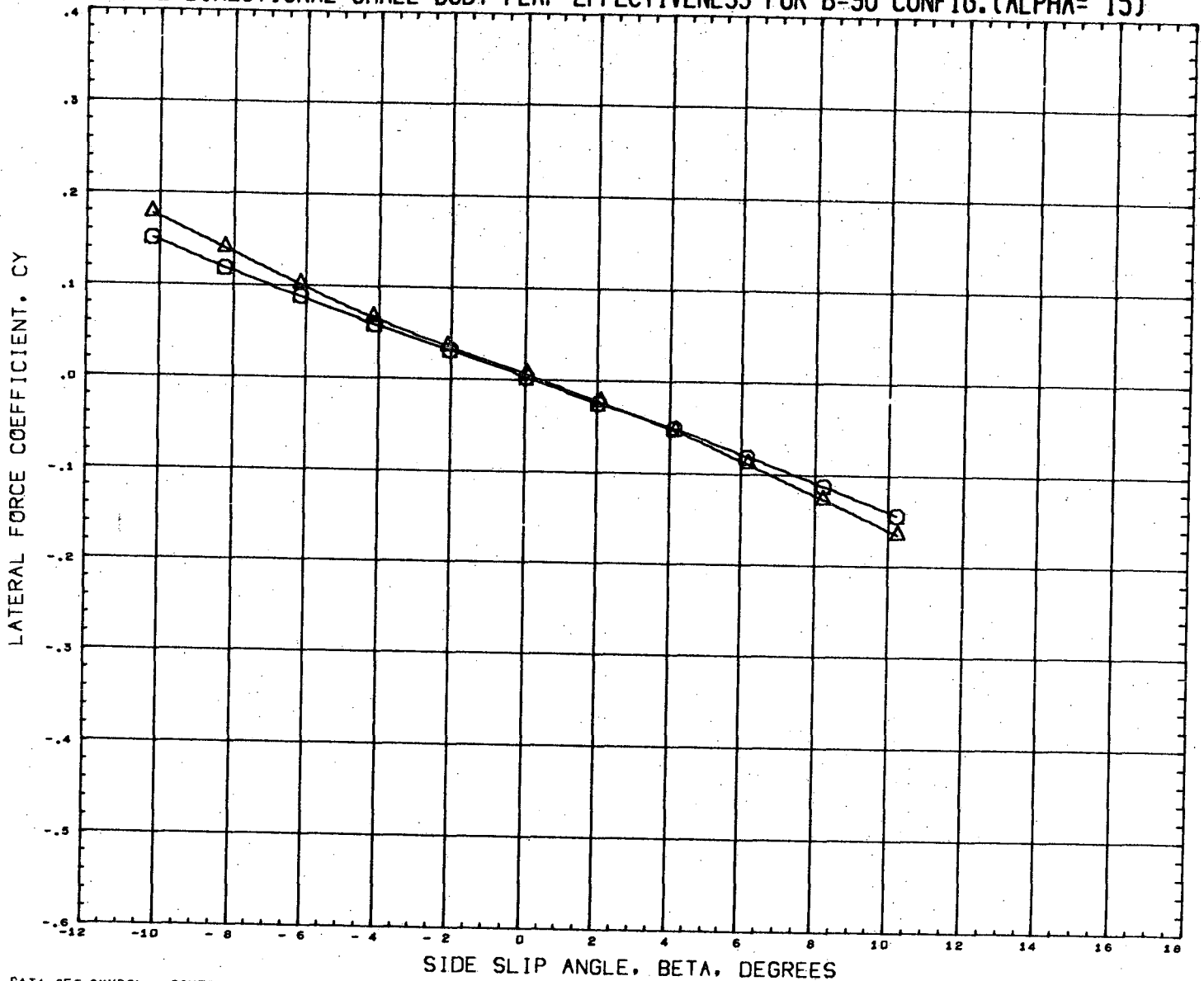
ELEVON
0.000
0.000

CANARD
0.000
0.000

REFERENCE INFORMATION
SREF 14.9040 SQ. IN.
LREF 3.0120 IN.
BREF 6.0100 IN.
XMRP 7.2990 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0035

MACH 1.964

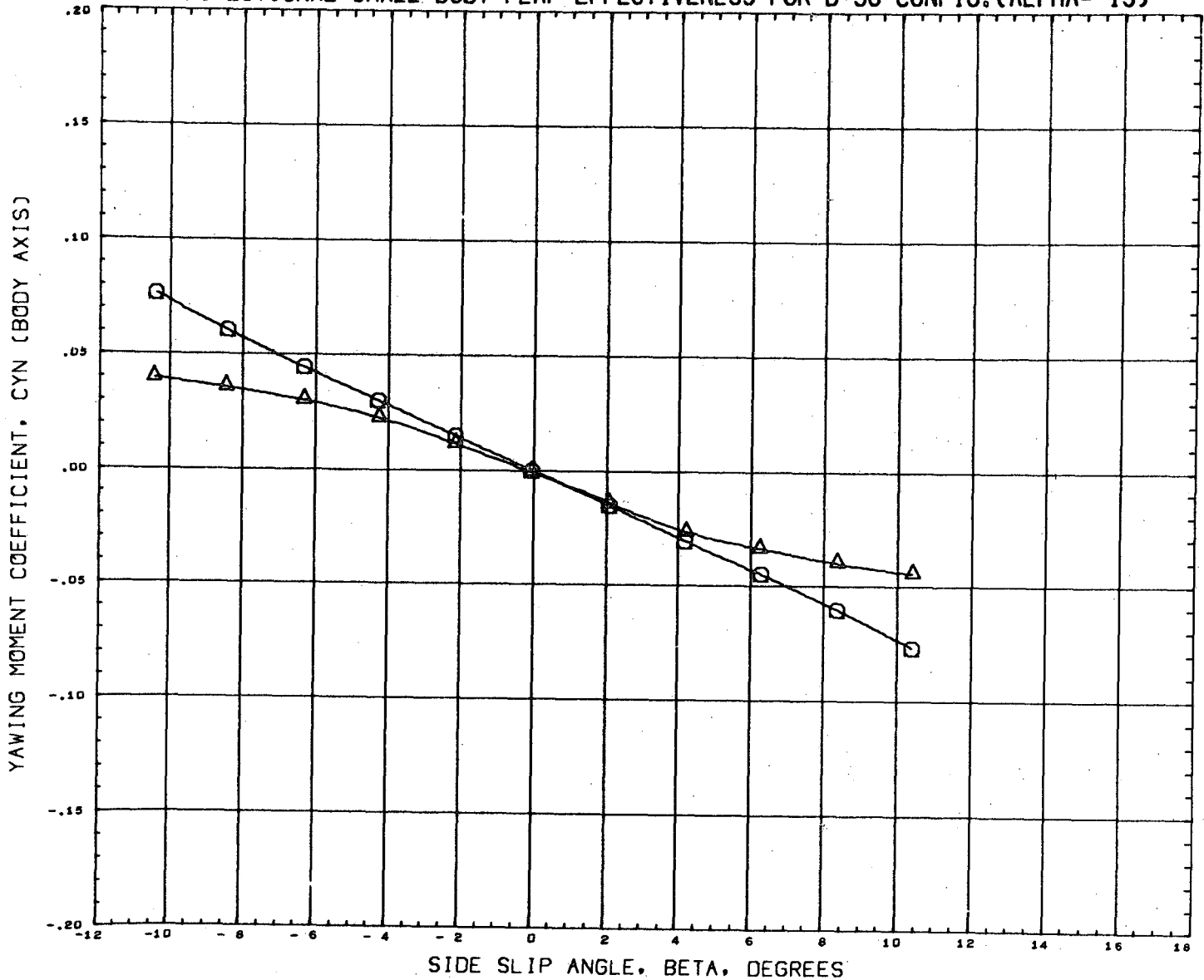
LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-SU CONFIG.(ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(B350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=DF	15.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A35FCB)	MSFC TWT-493 GD/C B25W19C8F7	ALPHA=15 C=D F=40	15.000	40.000	0.000	LREF 3.0120 IN.
						BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 2.990

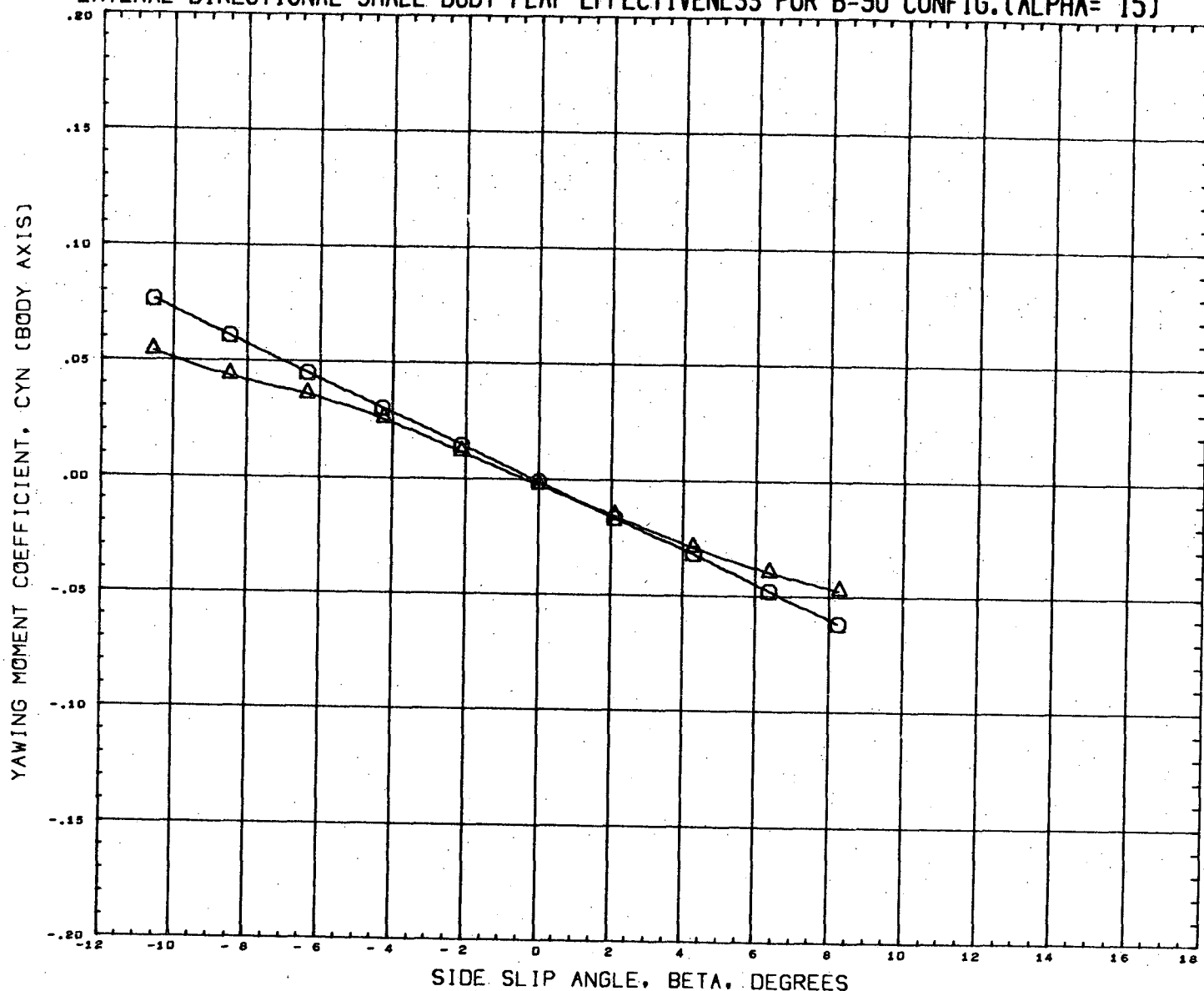
LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(B350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=DF	15.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A35FCB)	MSFC TWT-493 GD/C B25W19C8F7	ALPHA=15 C=D F=40	15.000	40.000	0.000	LREF 3.0120 IN.
						BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.192

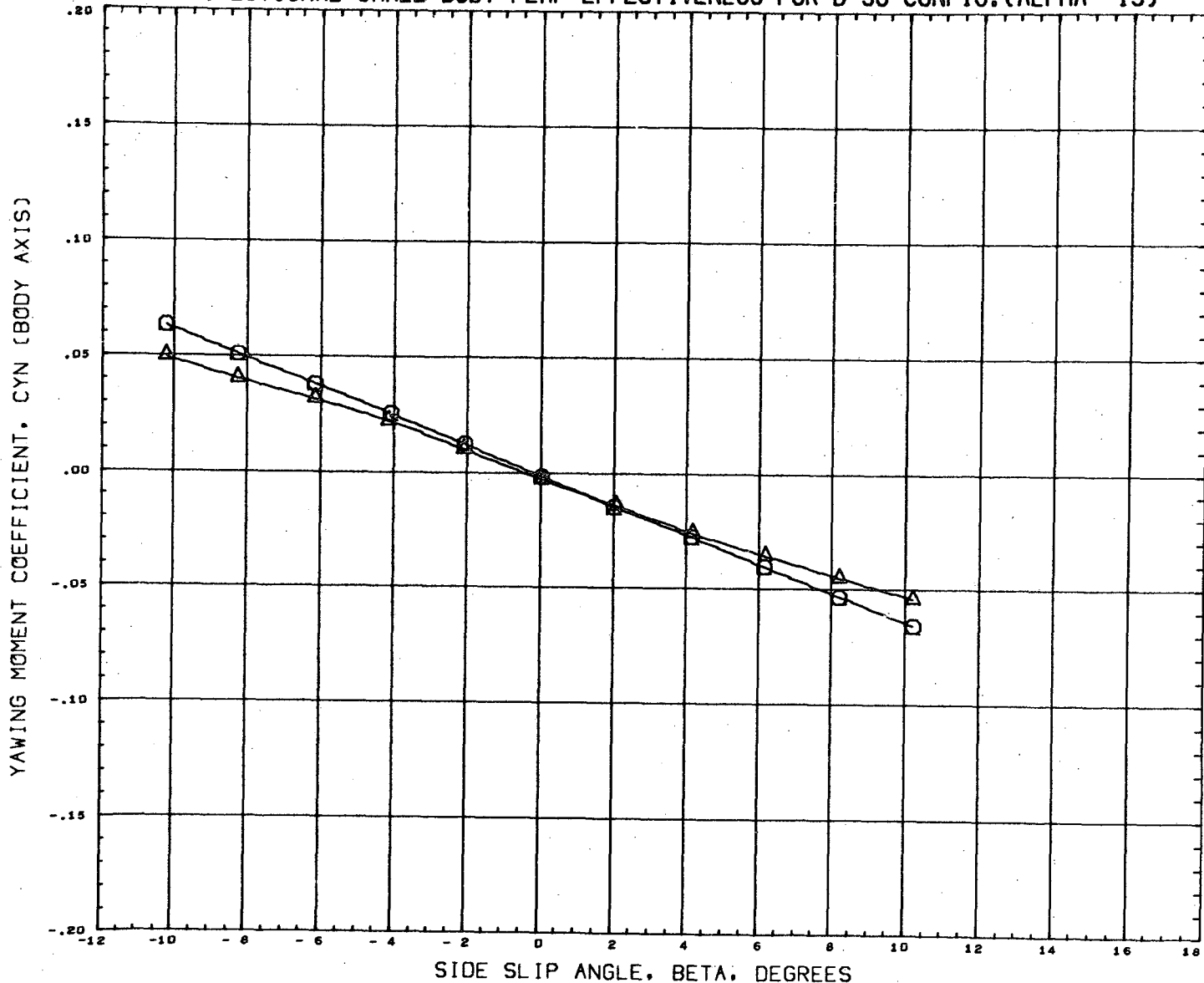
LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(B350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=0F	15.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A35FCB)	MSFC TWT-493 GD/C B25W19C8F7	ALPHA=15 C=D F=4D	15.000	40.000	0.000	LREF 3.0120 IN.
						BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.964

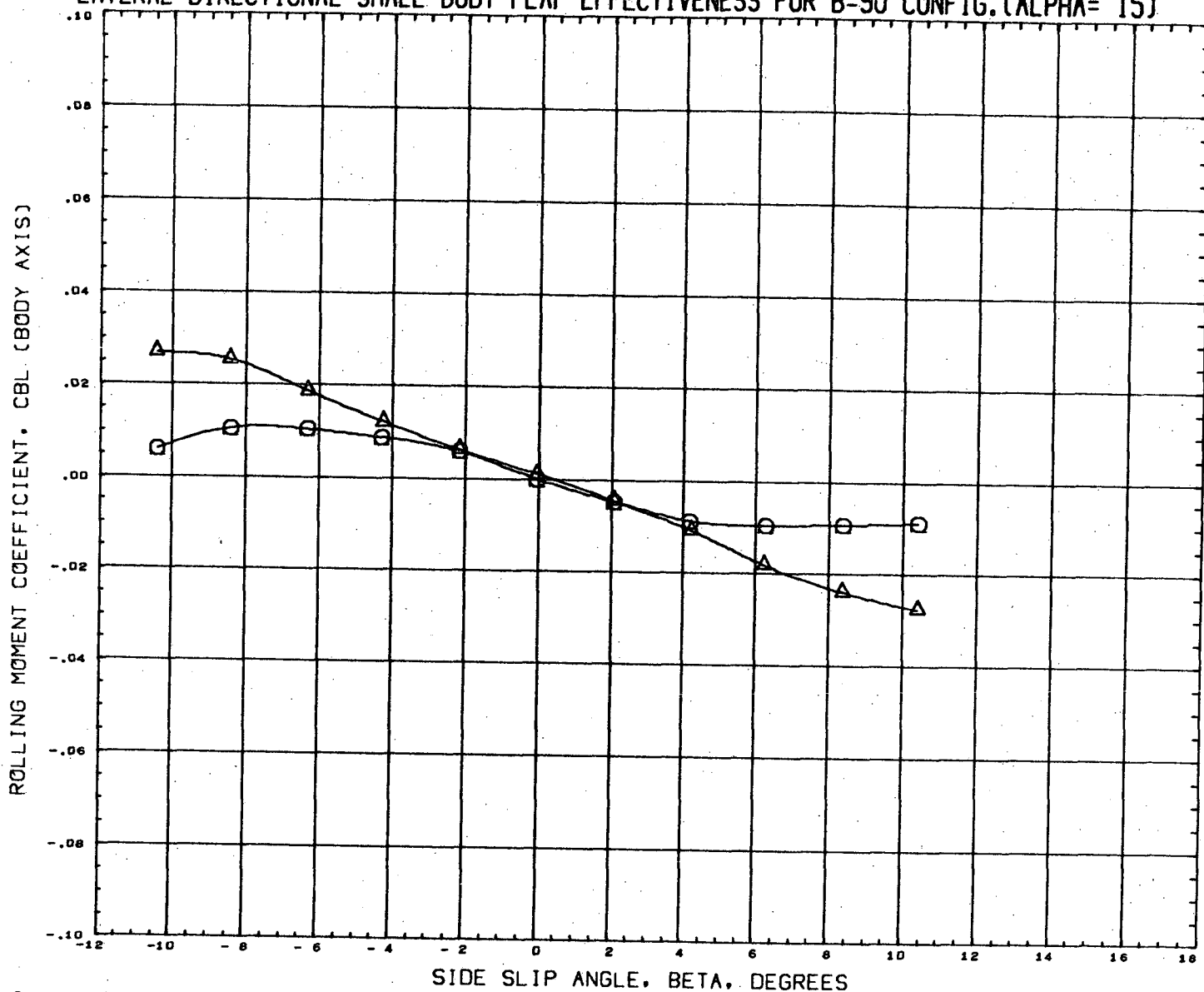
LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(B35OCC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=OF	15.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A35FCB)	MSFC TWT-493 GD/C B25W19C8F7	ALPHA=15 C=D F=40	15.000	40.000	0.000	LREF 3.0120 IN.
						BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 2.990

LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B35OCC)
(A35FCB)



MSFC TWT-493 GD/C B25W19C8
MSFC TWT-493 GD/C B25W19C8F7

ALPHA=15 C=0R=0F
ALPHA=15 C=0 F=40

ALPHA
15.000
15.000

B-FLAP
0.000
40.000

ELEVON
0.000
0.000

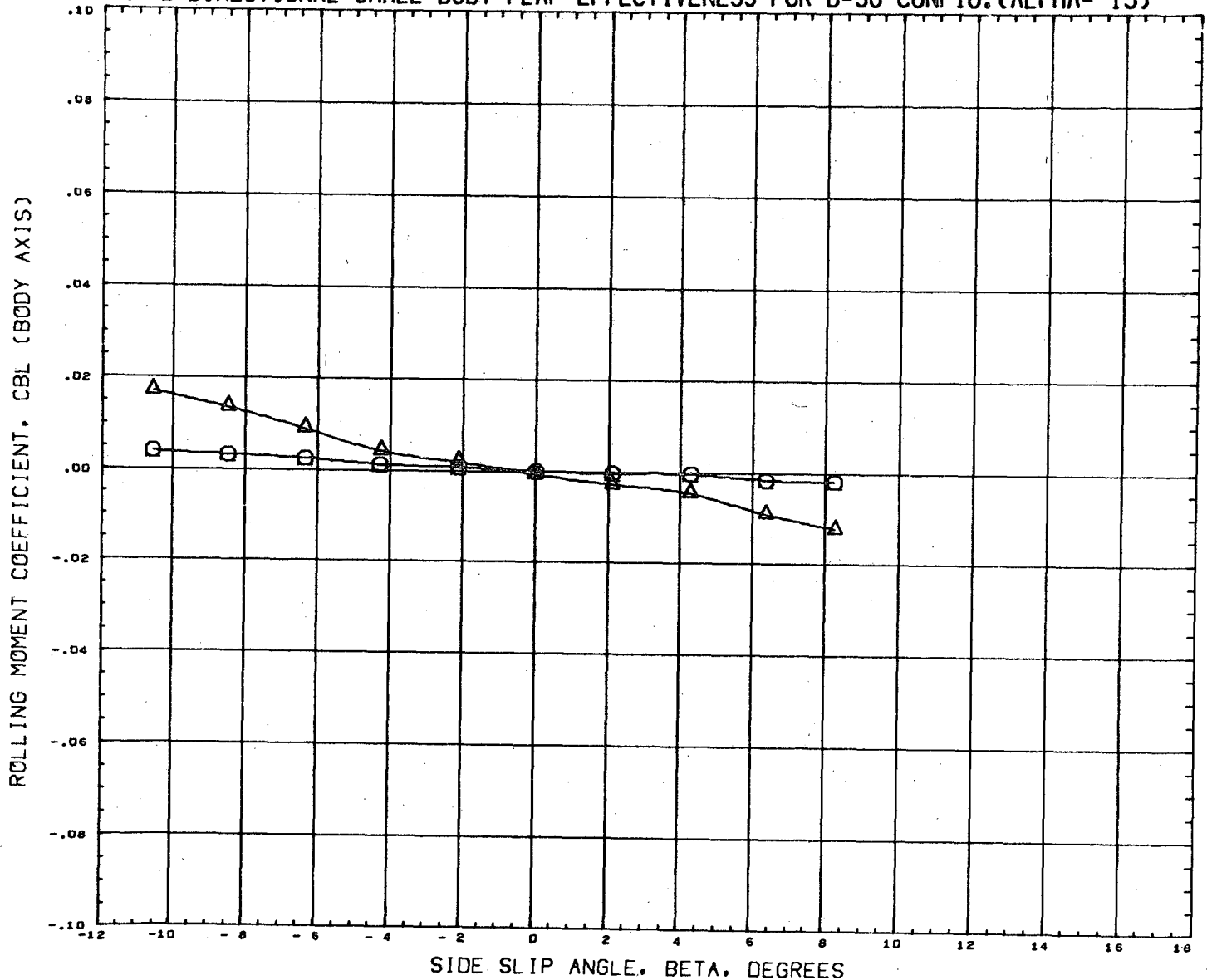
CANARD
0.000
0.000

REFERENCE INFORMATION
SREF 14.9040 SQ. IN.
LREF 3.0120 IN.
BREF 6.0100 IN.
XMRP 7.2990 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0035

MACH

1.192

LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

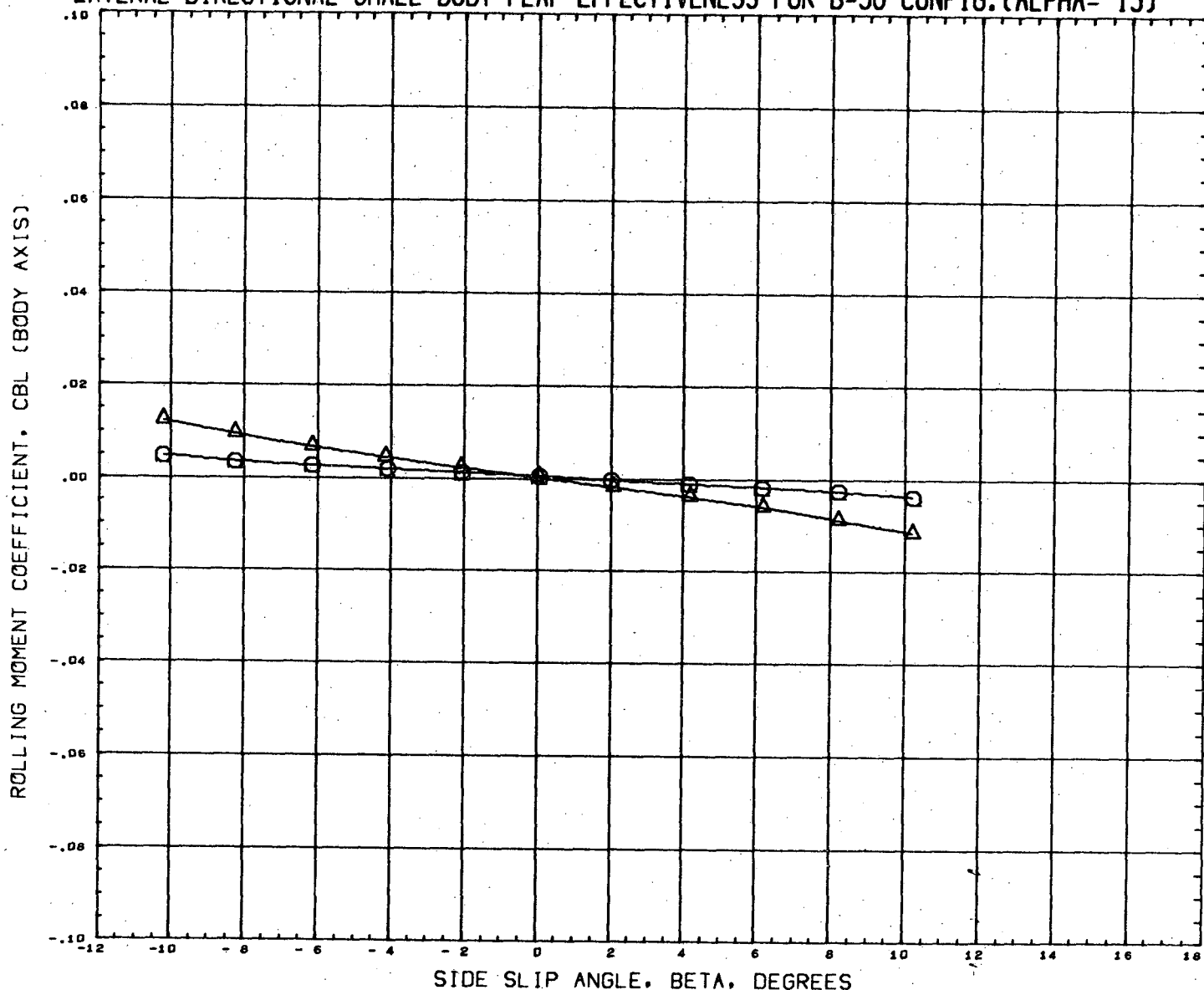
(B350CC) MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF
 (A35FCB) MSFC TWT-493 GD/C B25W19C8F7 ALPHA=15 C=U F=40

ALPHA B-FLAP ELEVON CANARD
 15.000 0.000 0.000 0.000
 15.000 40.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 1.964

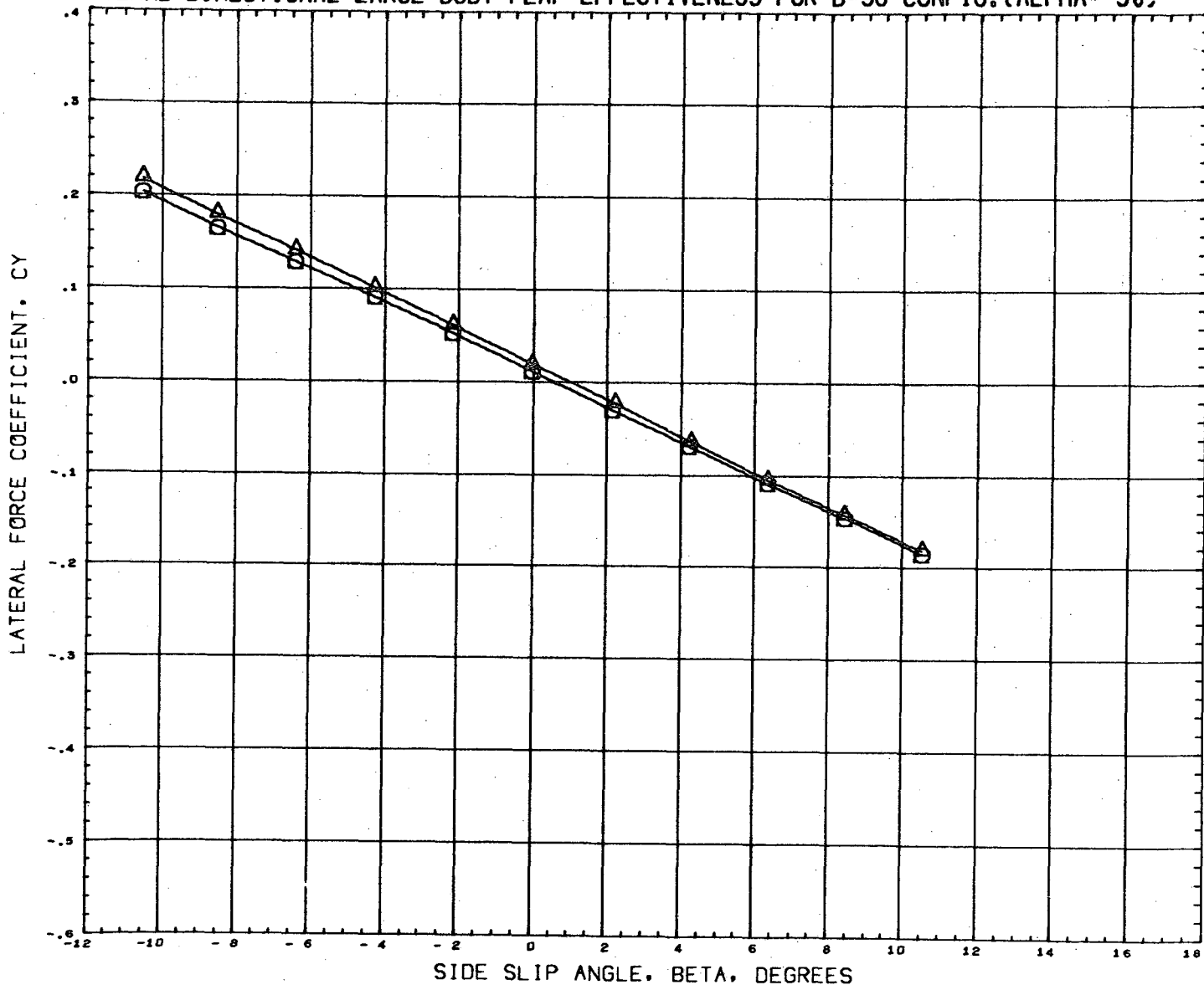
LATERAL-DIRECTIONAL SMALL BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION	
(B350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=DF	15.000	0.000	0.000	SREF	14.9040 SQ. IN.
(A35FCB)	MSFC TWT-493 GD/C B25W19C8F7	ALPHA=15 C=0 F=40	15.000	40.000	0.000	LREF	3.0120 IN.
						BREF	6.0180 IN.
						XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 2.990

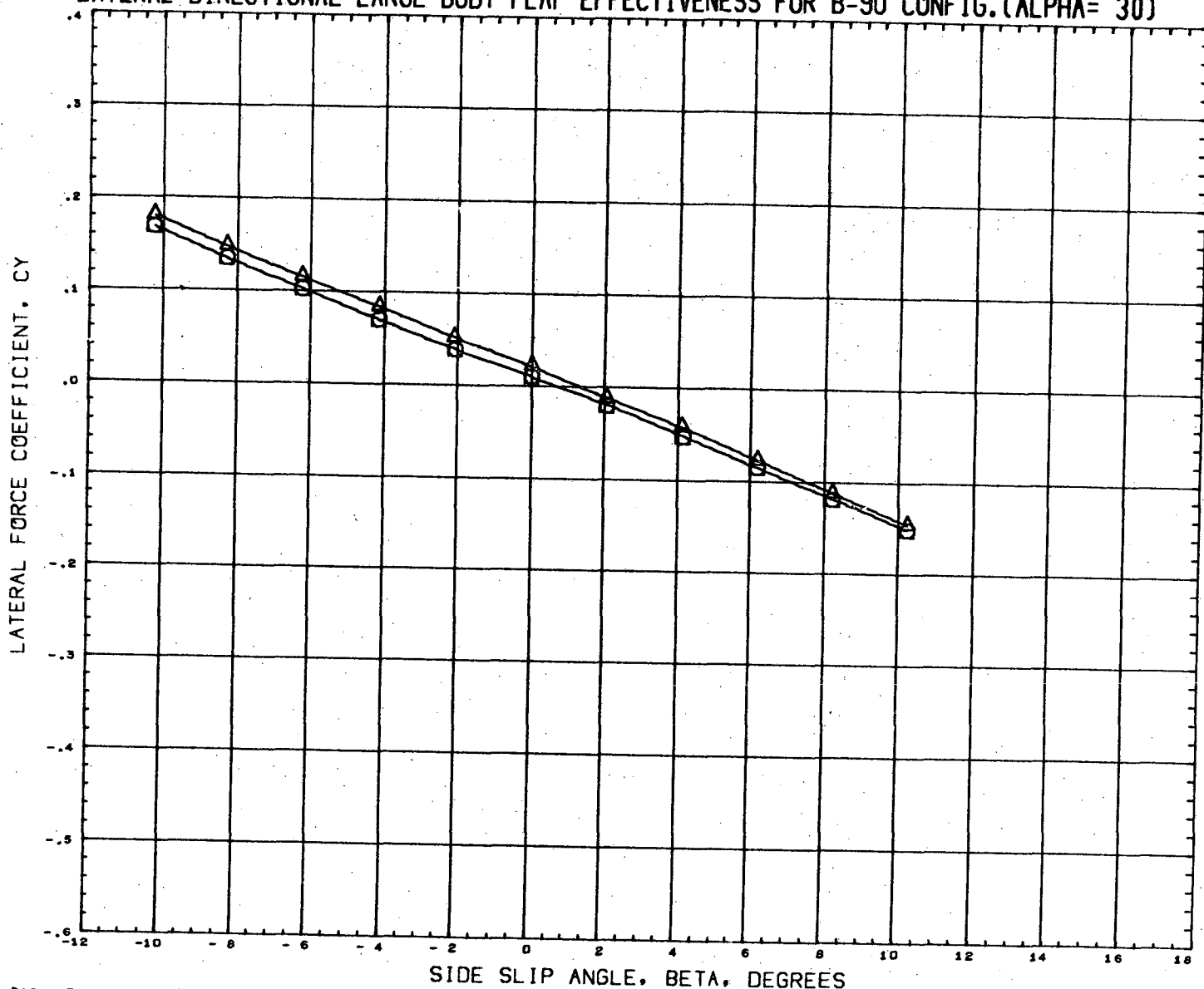
LATERAL-DIRECTIONAL LARGE BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION	
(B350CA)	MSFC TWT-493 GD/C B25W19C8	ALPHA=30 C=0 R=0	30.000	0.000	0.000	SREF	14.9040 SQ. IN.
(B35FCD)	MSFC TWT-493 GD/C B25W19C8F8	ALPHA=30 C=0 F=40	30.000	40.000	0.000	LREF	3.0120 IN.
						BREF	6.0180 IN.
						XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 2.990

LATERAL-DIRECTIONAL LARGE BODY FLAP EFFECTIVENESS FOR B-9U CONFIG.(ALPHA= 30)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B350CA) MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=D R=0

(B35FCD) MSFC TWT-493 GD/C B25W19C8F8 ALPHA=30 C=D F=40

ALPHA

30.000

B-FLAP

40.000

ELEVON

0.000

CANARD

0.000

REFERENCE INFORMATION

SREF 14.9040 SQ.IN.

LREF 3.0120 IN.

BREF 6.0180 IN.

XMRF 7.2990 IN.

YMRF 0.0000 IN.

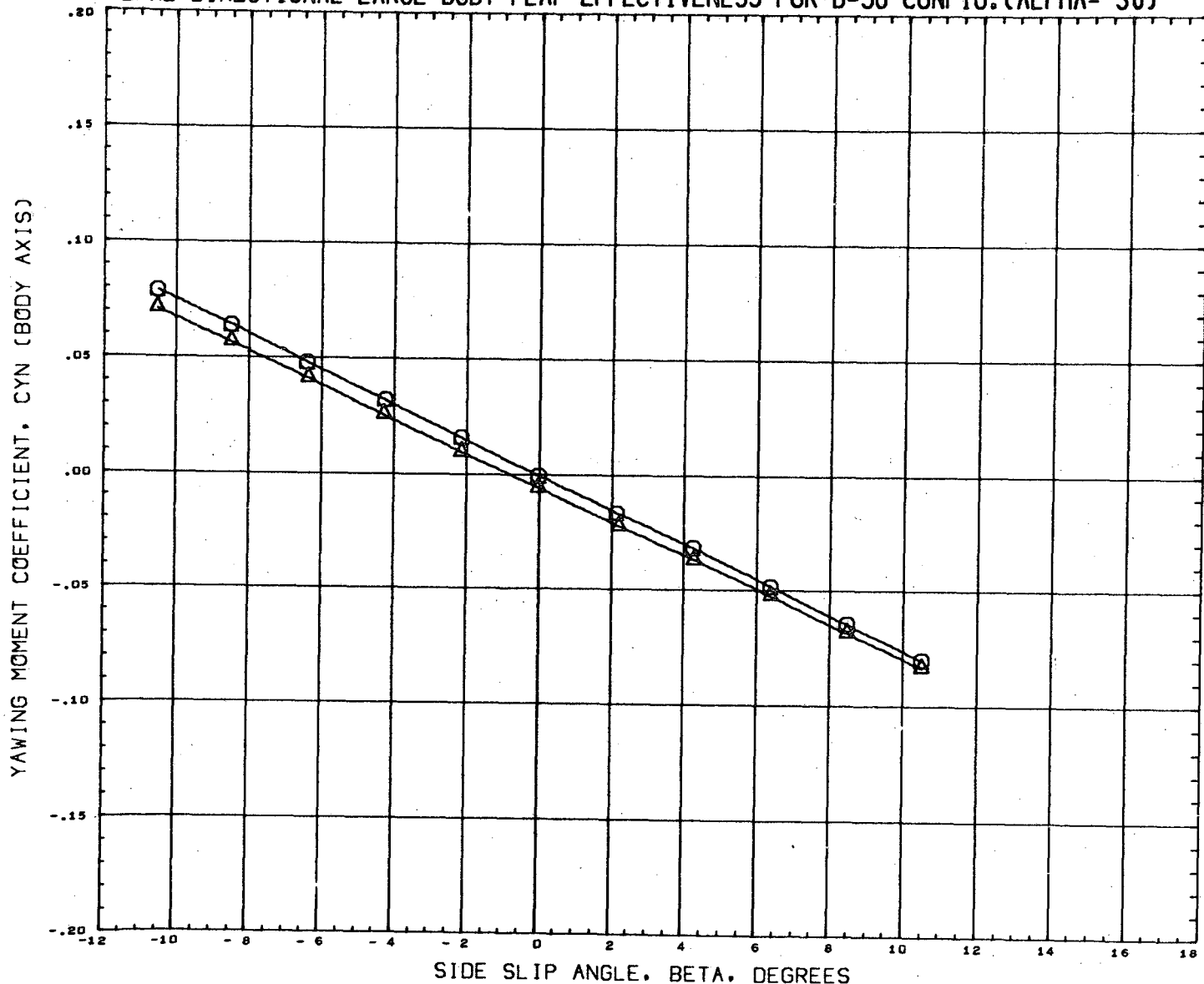
ZMRF 0.0000 IN.

SCALE 0.0035

MACH

4.959

LATERAL-DIRECTIONAL LARGE BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B350CA) MSFC TWT-493 GD/C B25W19C8
(B35FCD) MSFC TWT-493 GD/C B25W19C8F8

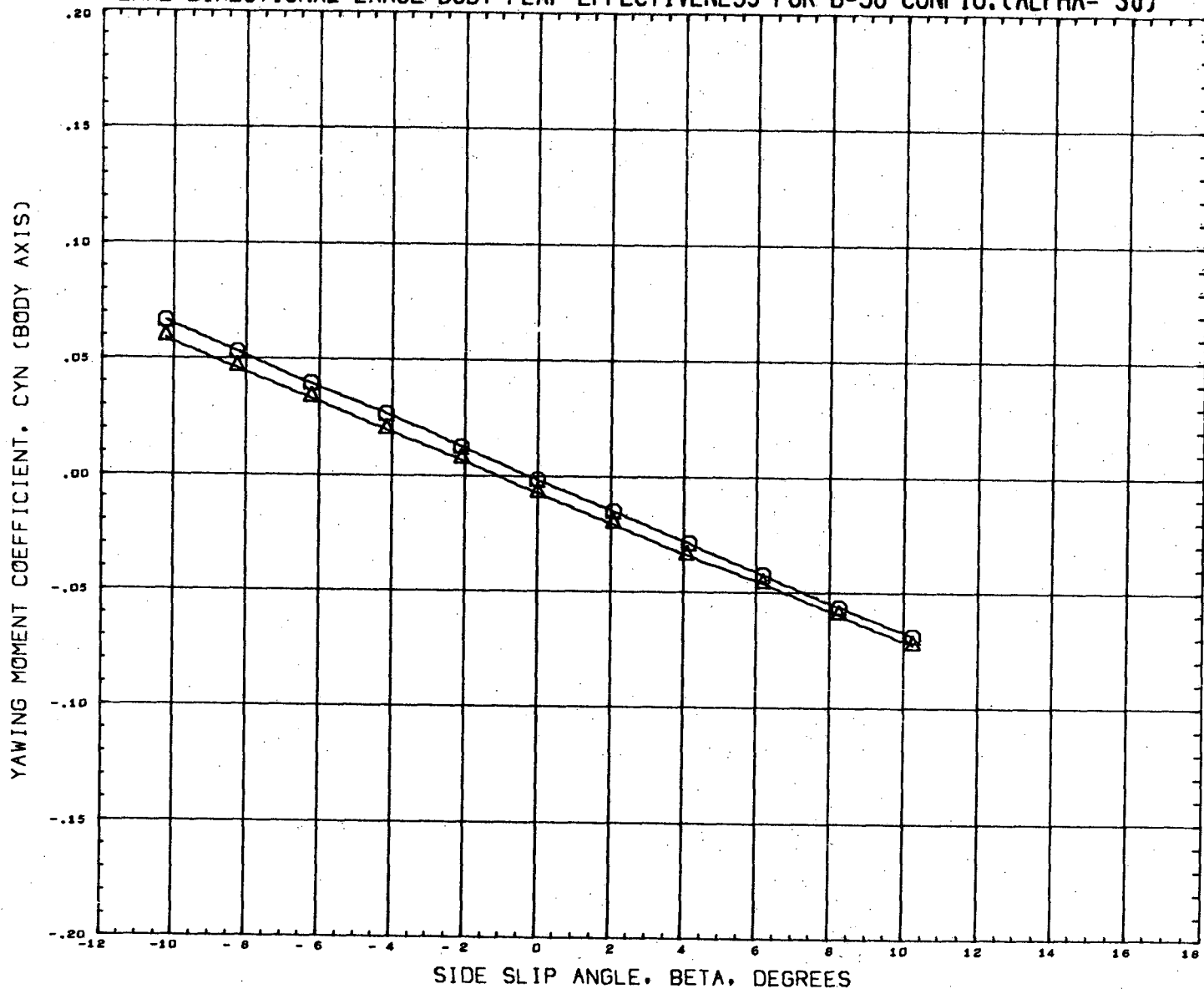
ALPHA=30 C=D R=0
ALPHA=30 C=D F=40

ALPHA	B-FLAP	ELEVON	CANARD
30.000		0.000	0.000
30.000	40.000	0.000	0.000

REFERENCE INFORMATION	
SREF	14.9040 SQ. IN.
LREF	3.0120 IN.
BREF	6.0180 IN.
XHRP	7.2990 IN.
YHRP	0.0000 IN.
ZHRP	0.0000 IN.
SCALE	0.0035

MACH 2.990

LATERAL-DIRECTIONAL LARGE BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (B350CA) MSFC TWT-493 GD/C B25W19C8
 (B35FCD) MSFC TWT-493 GD/C B25W19C8F8

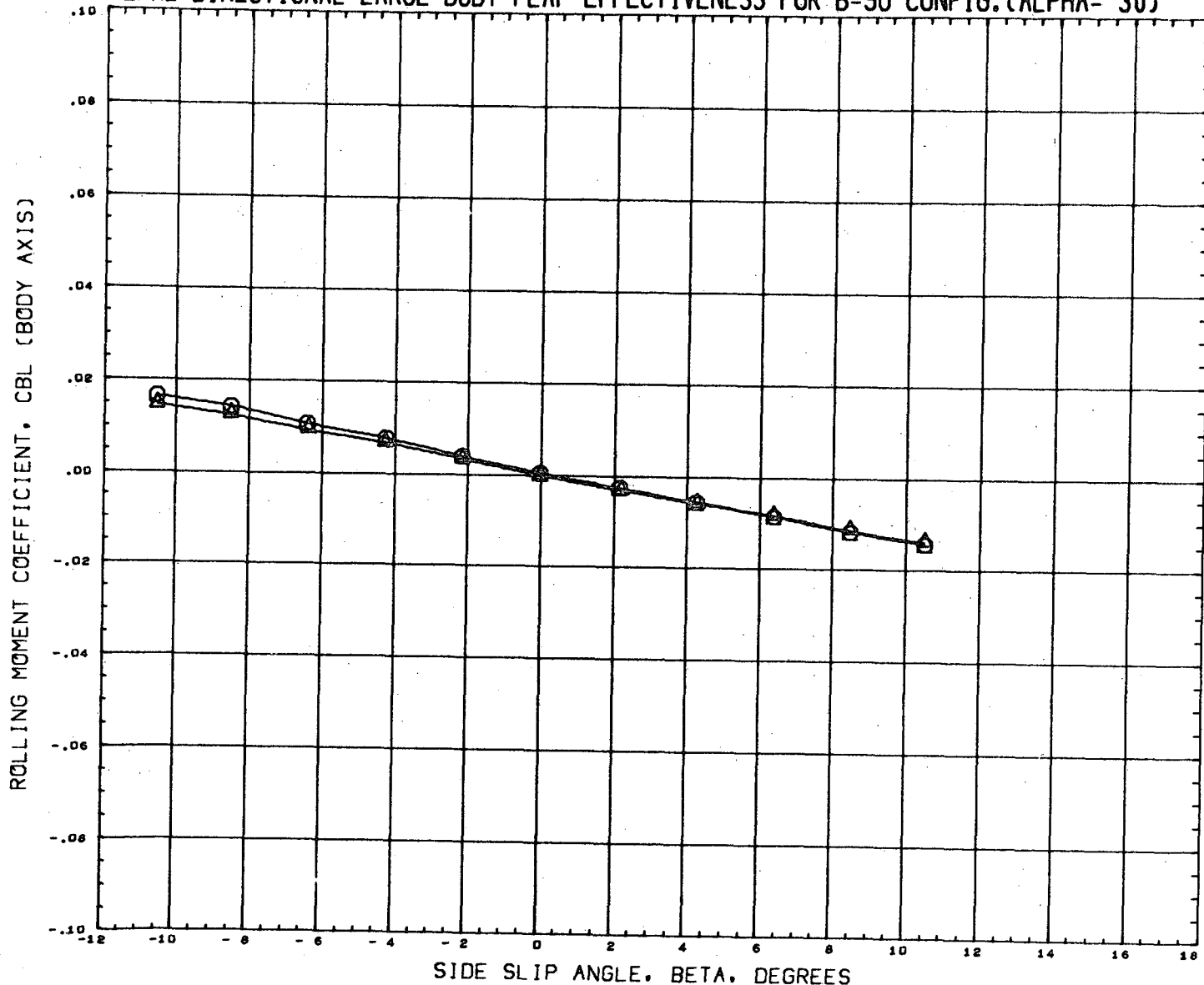
ALPHA=30 C=0 R=0
 ALPHA=30 C=0 F=40

ALPHA B-FLAP ELEVON CANARD
 30.000 0.000 0.000 0.000
 30.000 40.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 4.959

LATERAL-DIRECTIONAL LARGE BODY FLAP EFFECTIVENESS FOR B-9U CONFIG.(ALPHA= 30)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B350CA) MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=D R=0
 (B35FCD) MSFC TWT-493 GD/C B25W19C8F8 ALPHA=30 C=D F=40

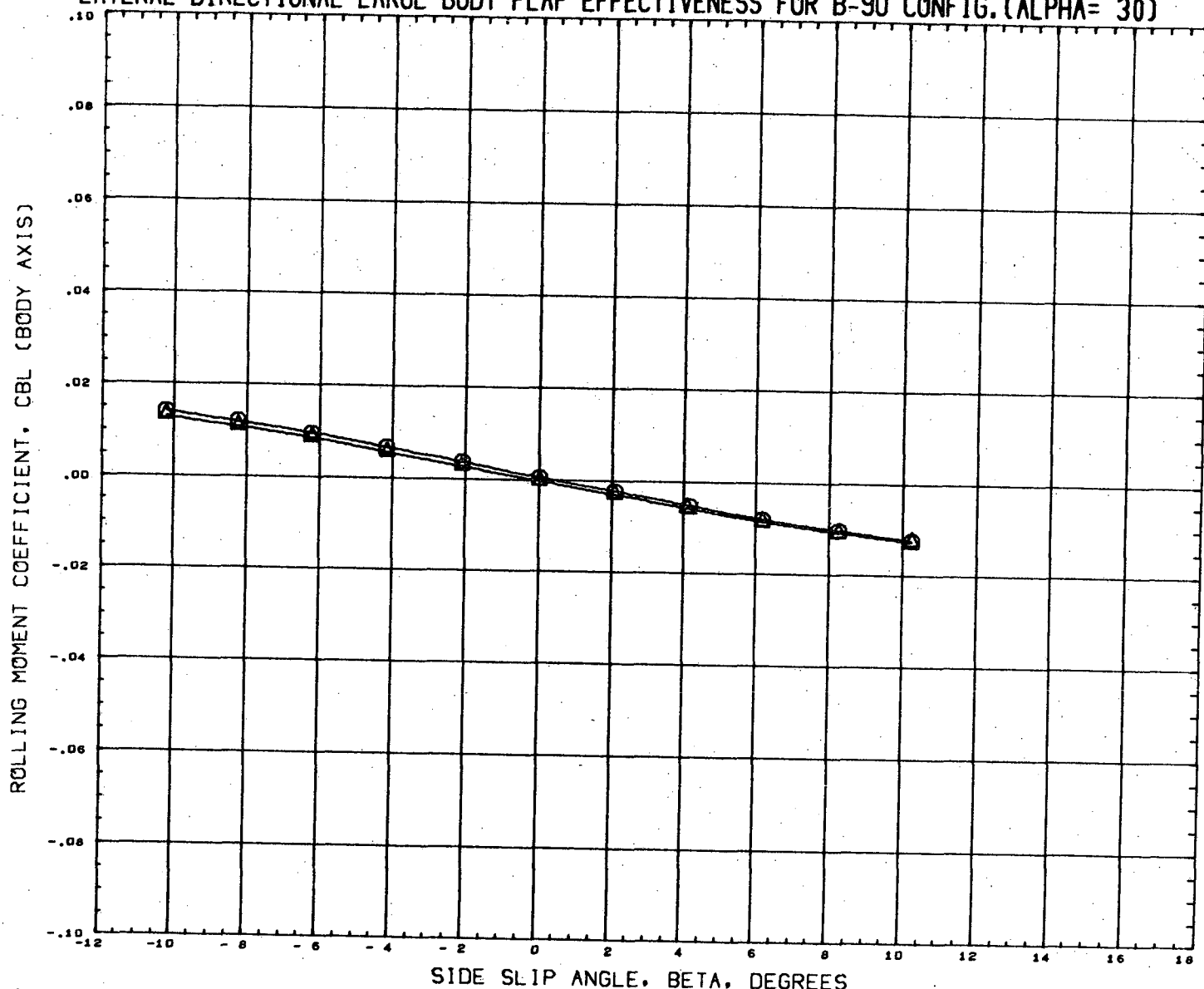
ALPHA	B-FLAP	ELEVON	CANARD
30.000		0.000	0.000
30.000	40.000	0.000	0.000

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

MACH 2.990

6

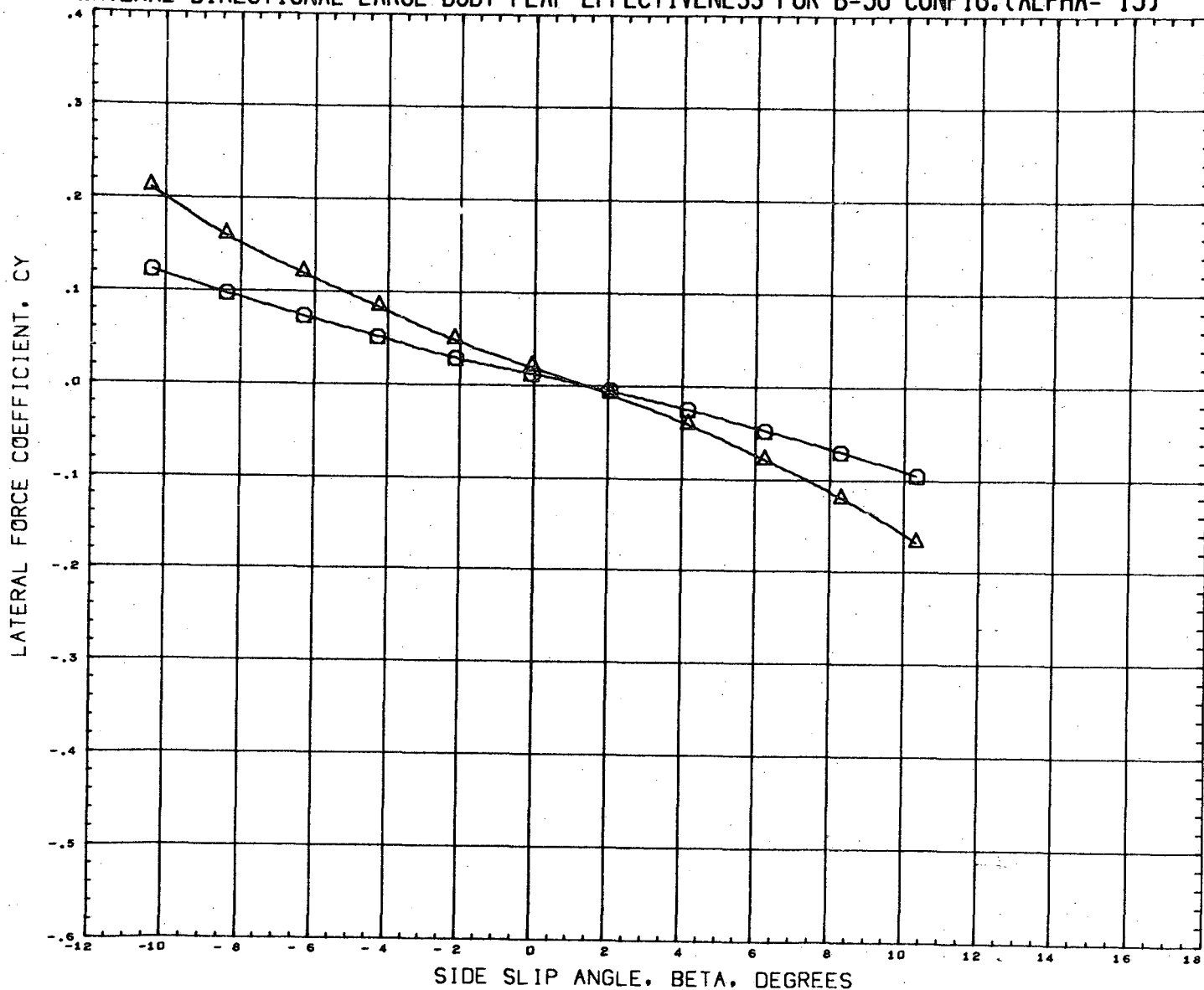
LATERAL-DIRECTIONAL LARGE BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(B350CA)	MSFC TWT-493 GD/C B25W19C8	ALPHA=30 C=D R=0	30.000	0.000	0.000	SREF 14.9040 SQ. IN.
(B35FCD)	MSFC TWT-493 GD/C B25W19C8F8	ALPHA=30 C=D F=40	30.000	40.000	0.000	LREF 3.0120 IN.
						BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 4.959

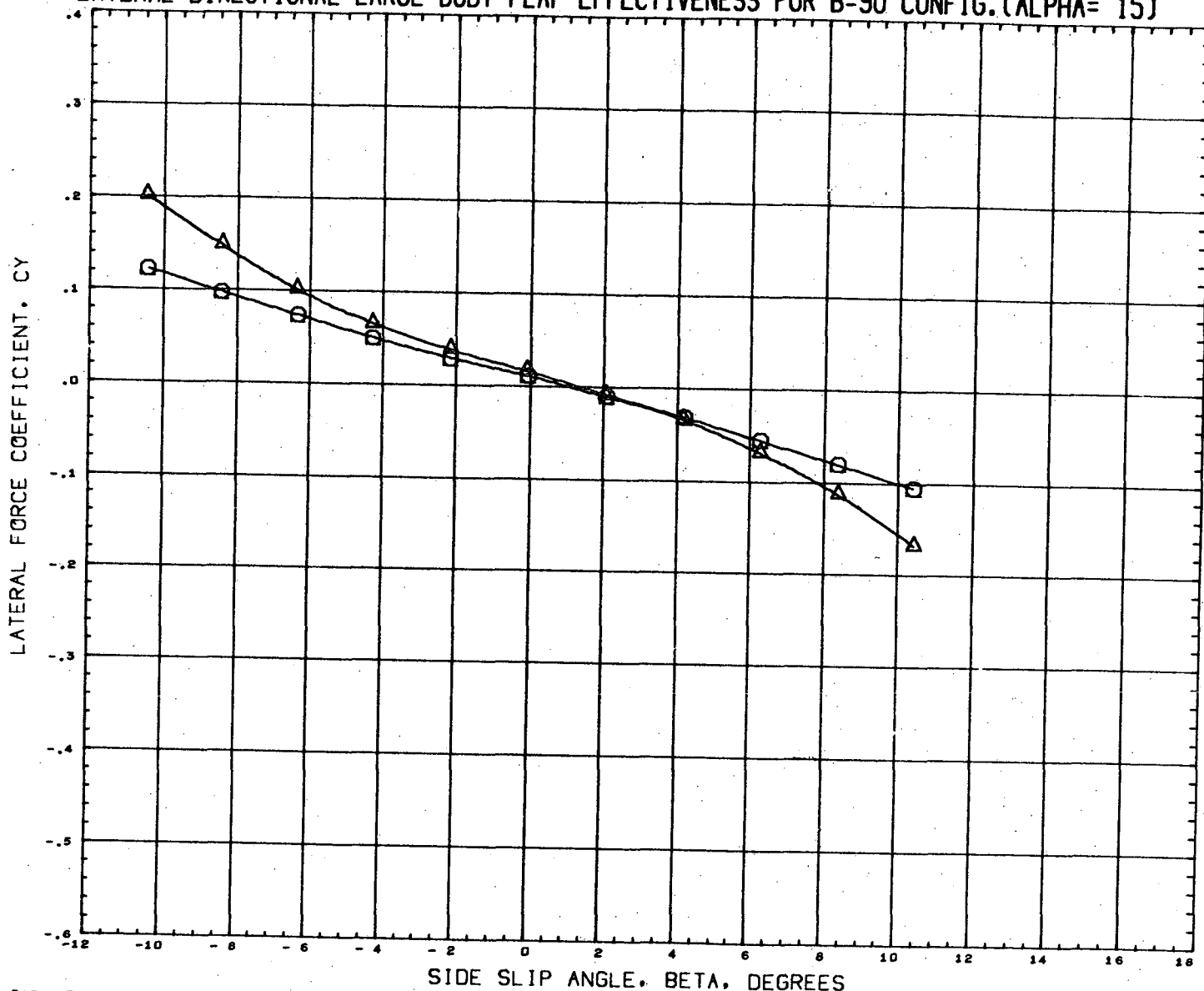
LATERAL-DIRECTIONAL LARGE BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION	
(C35OCC)	MSFC TWT-493 GD/C B25W19C8	15.000		0.000	0.000	SREF	14.9040 SQ. IN.
(Z35FCE)	MSFC TWT-493 GD/C B25W19C8F8	15.000	40.000	0.000	0.000	LREF	3.0120 IN.
						BREF	6.0180 IN.
						XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 0.992

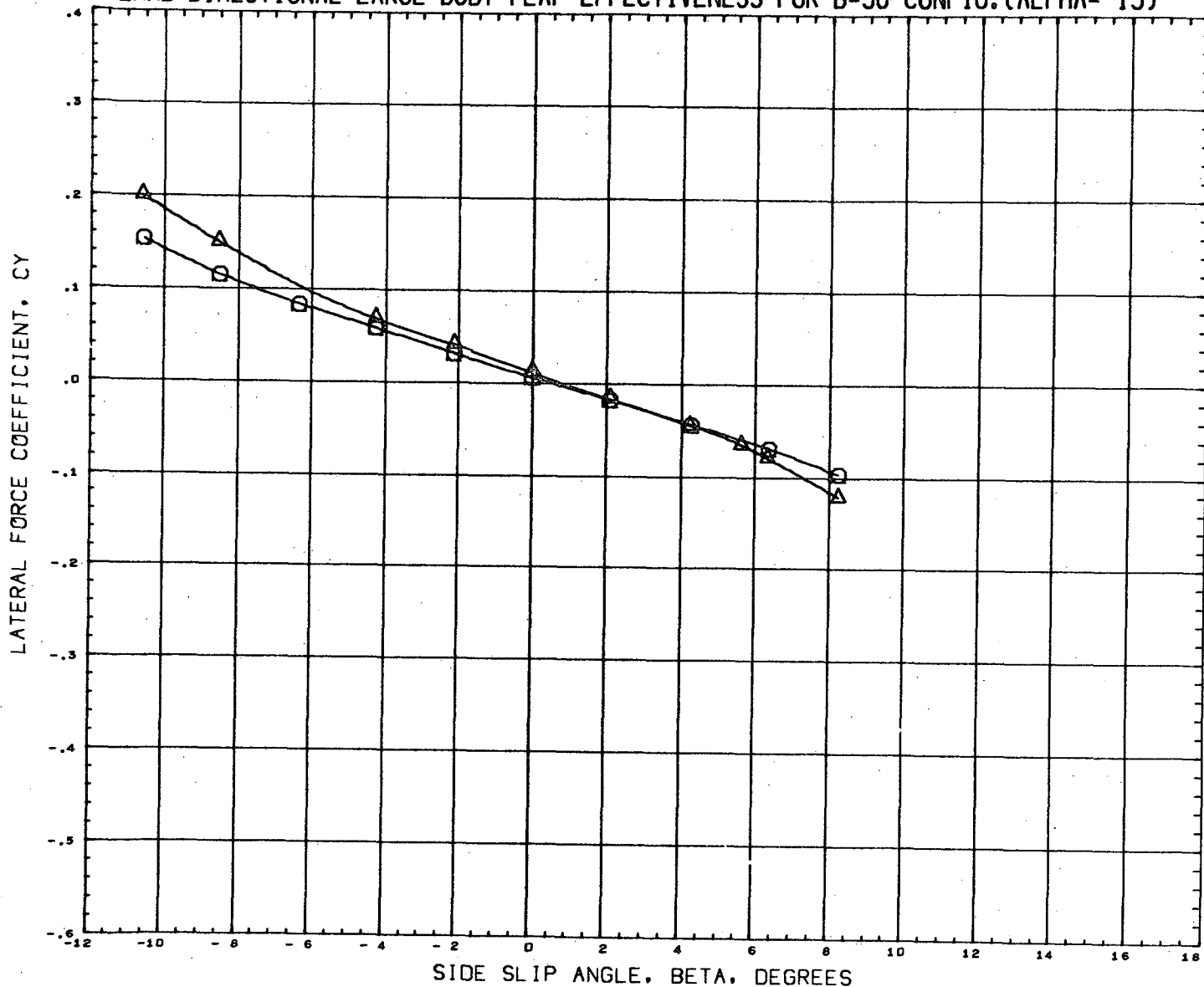
LATERAL-DIRECTIONAL LARGE BODY FLAP EFFECTIVENESS FOR B-9U CONFIG.(ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION	
(C350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=OR=OF	15.000	0.000	0.000	SREF	14.9040 SQ. IN.
(Z35FCE)	MSFC TWT-493 GD/C B25W19C8F8	ALPHA=15 C=D F=40	15.000	40.000	0.000	LREF	3.0120 IN.
						BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.192

LATERAL-DIRECTIONAL LARGE BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

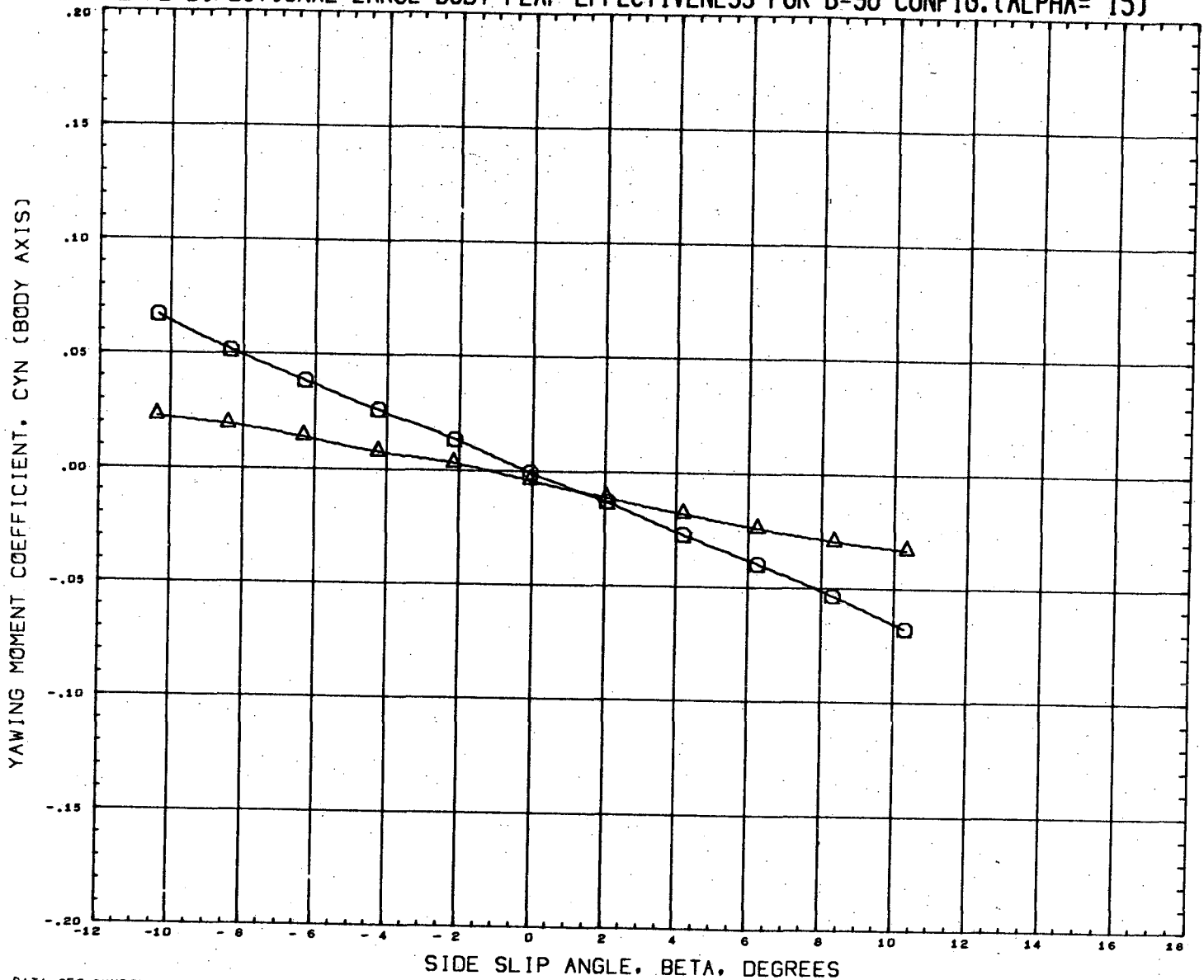
(C350CC) MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=OR=DF
 (Z35FCE) MSFC TWT-493 GD/C B25W19C8F8 ALPHA=15 C=D F=40

ALPHA B-FLAP ELEVON CANARD
 15.000 40.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0160 IN.
 XMRF 7.2990 IN.
 YMRF 0.0000 IN.
 ZMRF 0.0000 IN.
 SCALE 0.0035

MACH 1.964

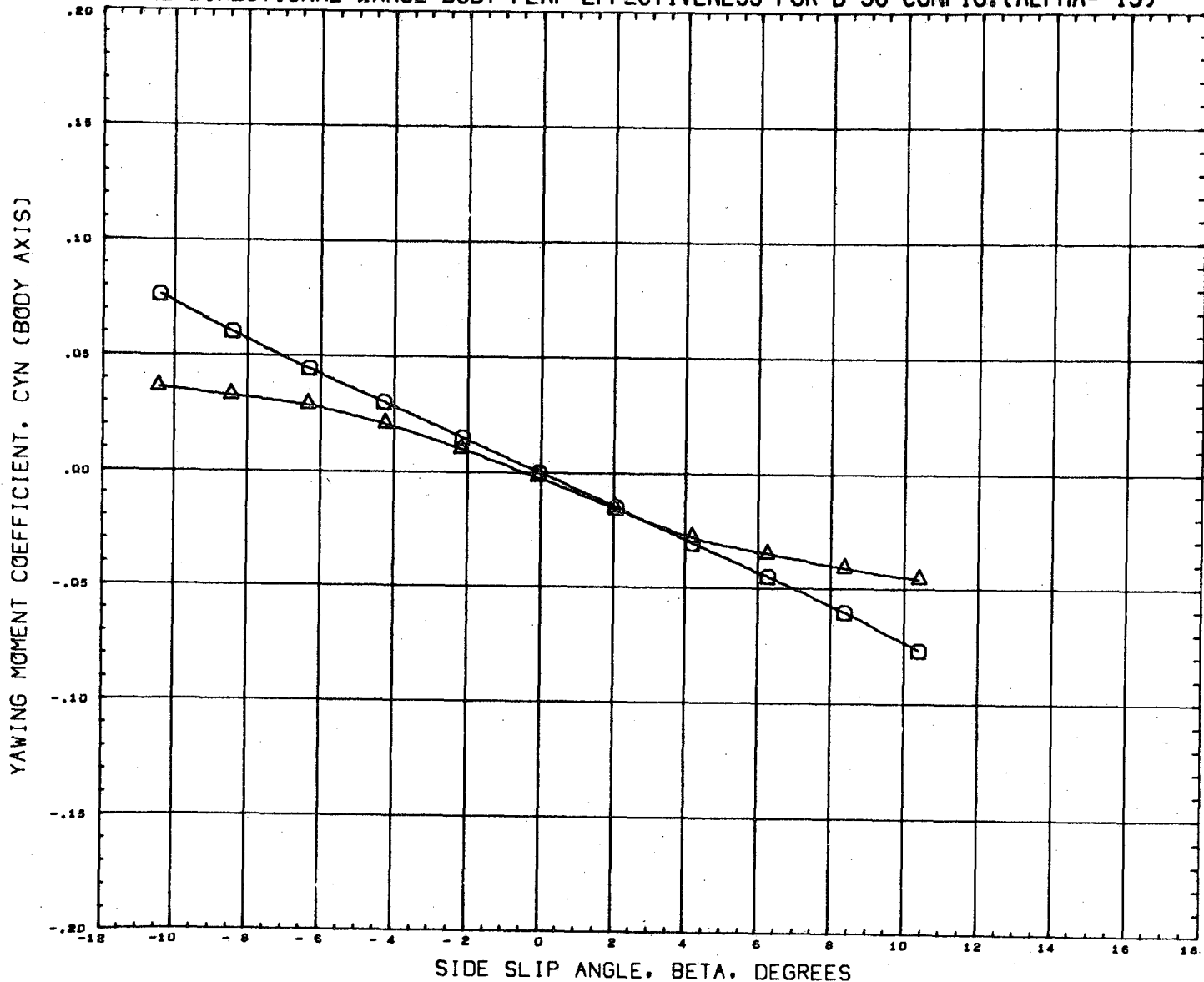
LATERAL-DIRECTIONAL LARGE BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION	
(C350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=DF	15.000	0.000	0.000	SREF	14.9040 SQ. IN.
(Z35FCE)	MSFC TWT-493 GD/C B25W19C8F8	ALPHA=15 C=D F=40	15.000	40.000	0.000	LREF	3.0120 IN.
						BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 0.992

LATERAL-DIRECTIONAL LARGE BODY FLAP EFFECTIVENESS FOR B-9U CONFIG.(ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

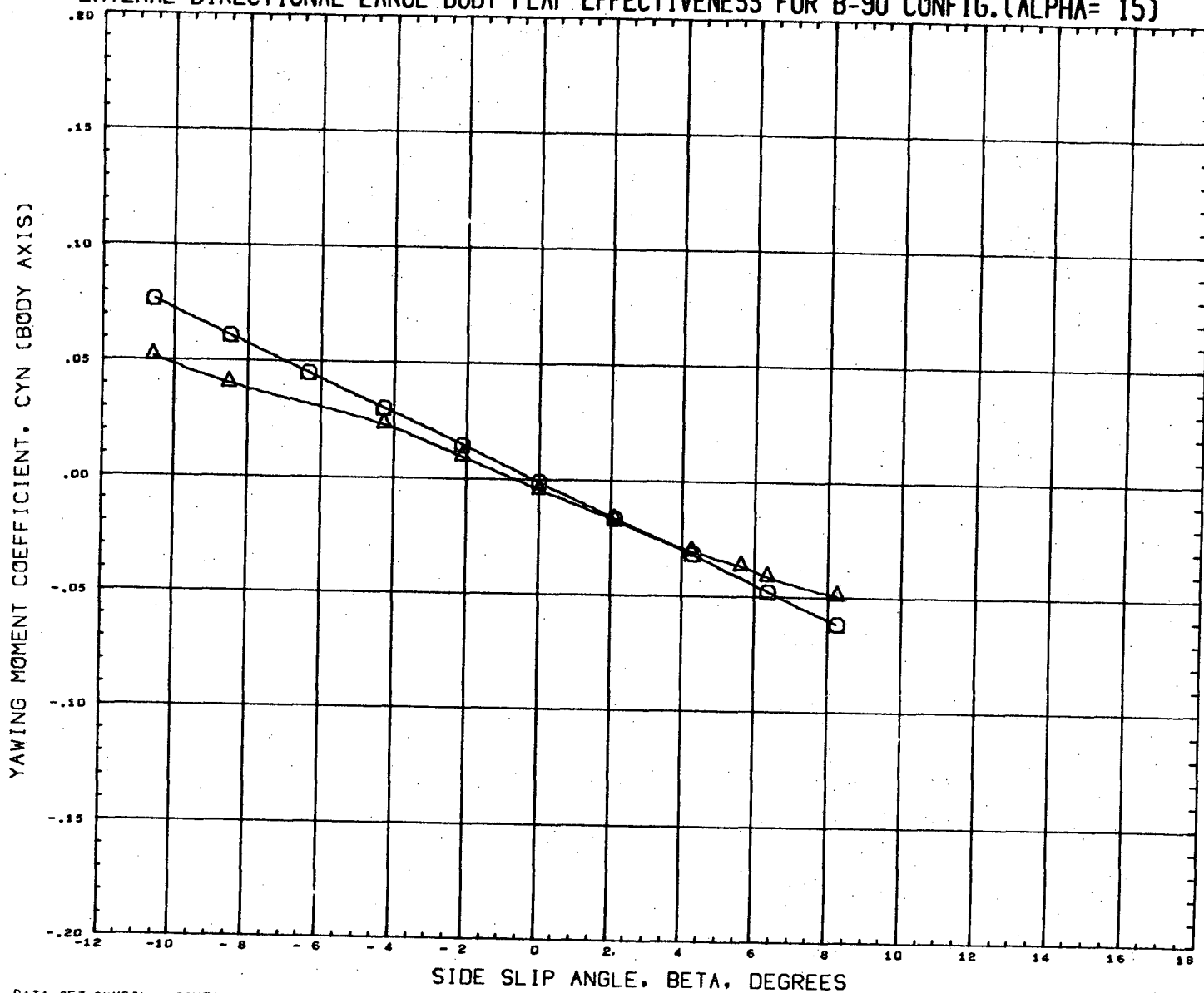
(C350CC) MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF
 (Z35FCE) MSFC TWT-493 GD/C B25W19C8F8 ALPHA=15 C=D F=40

ALPHA B-FLAP ELEVON CANARD
 15.000 0.000 0.000 0.000
 15.000 40.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 50. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 1.192

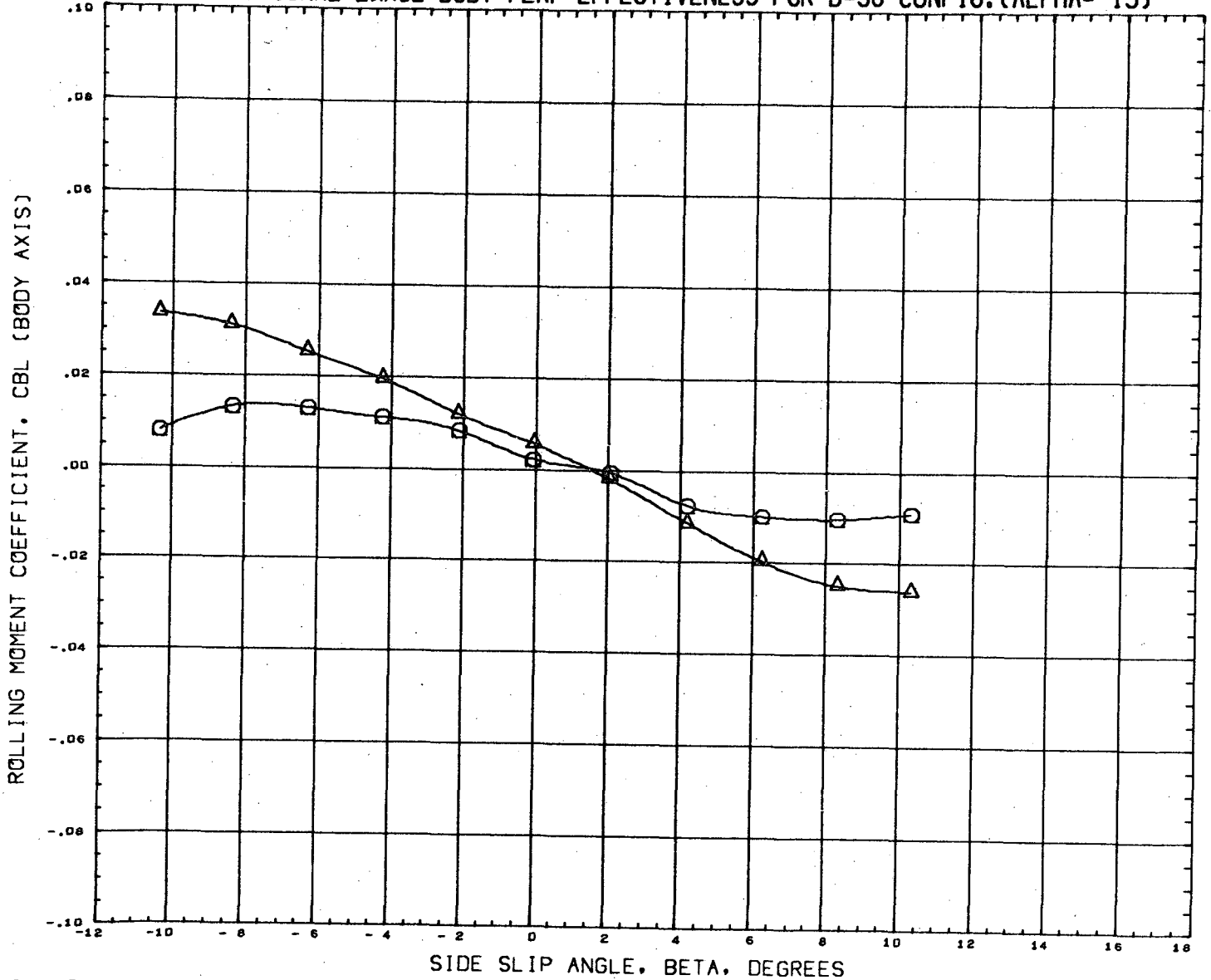
LATERAL-DIRECTIONAL LARGE BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(C350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=0R=0F	15.000	0.000	0.000	SREF 14.9040 SQ. IN.
(Z35FCE)	MSFC TWT-493 GD/C B25W19C8F8	ALPHA=15 C=0 F=40	15.000	40.000	0.000	LREF 3.0120 IN.
						BREF 6.0160 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.964

LATERAL-DIRECTIONAL LARGE BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

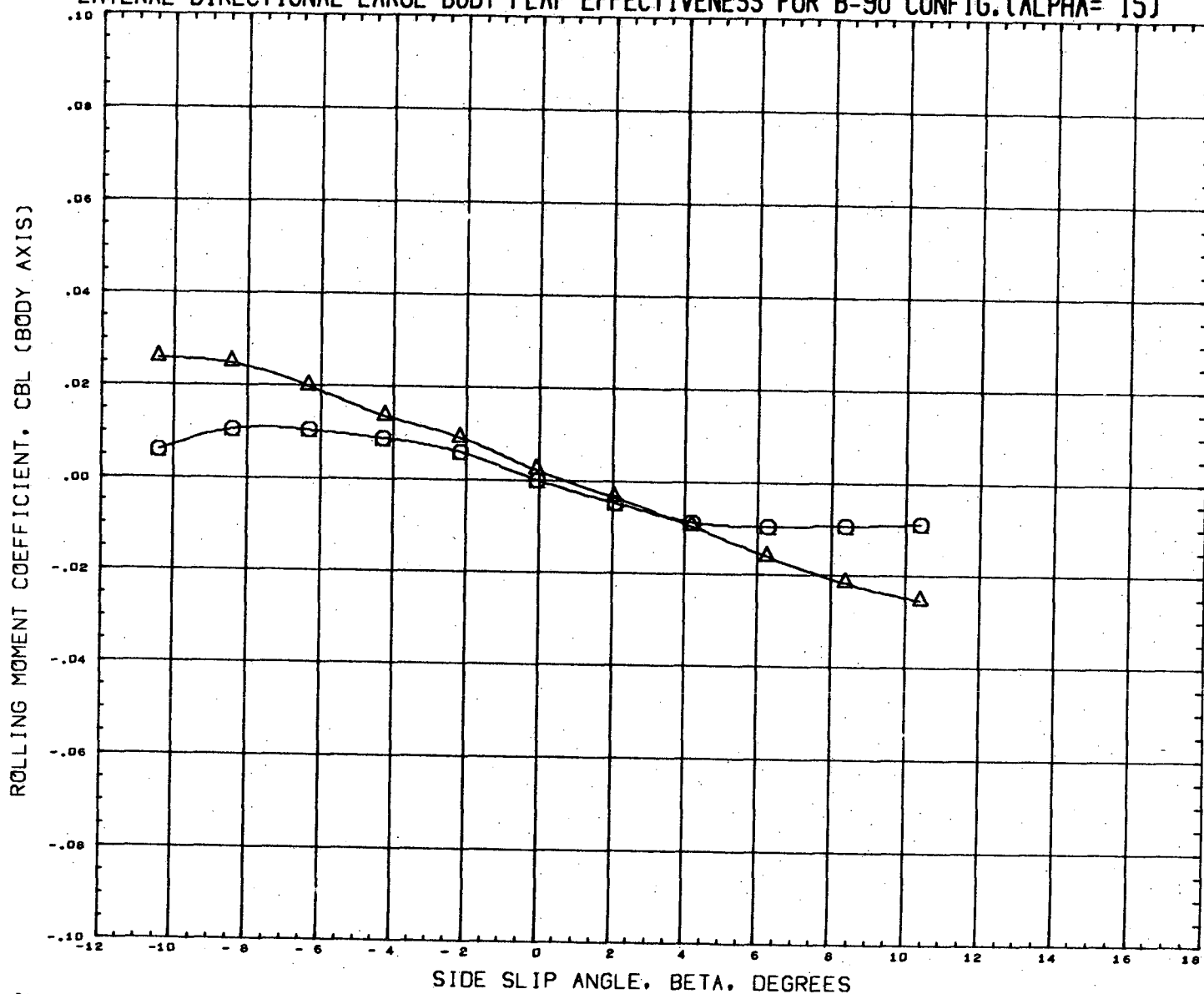
(C350CC) MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF
 (Z35FCE) MSFC TWT-493 GD/C B25W19C8F8 ALPHA=15 C=0 F=40

ALPHA B-FLAP ELEVON CANARD
 15.000 15.000 0.000 0.000
 15.000 40.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 0.992

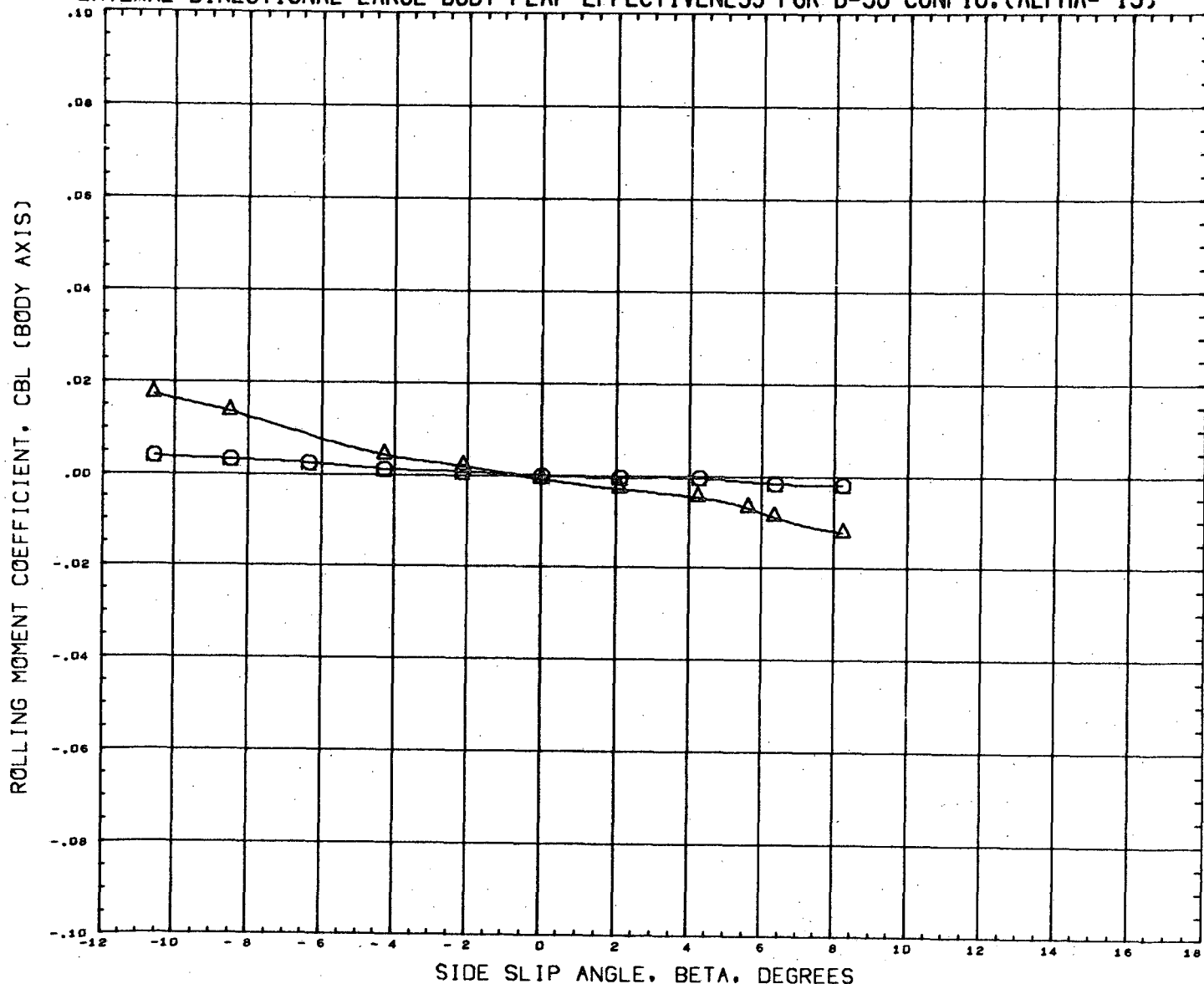
LATERAL-DIRECTIONAL LARGE BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION	
(C350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=DF	15.000	0.000	0.000	SREF	14.9040 SQ. IN.
(Z35FCE)	MSFC TWT-493 GD/C B25W19C8F8	ALPHA=15 C=D F=40	15.000	40.000	0.000	LREF	3.0120 IN.
						BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.192

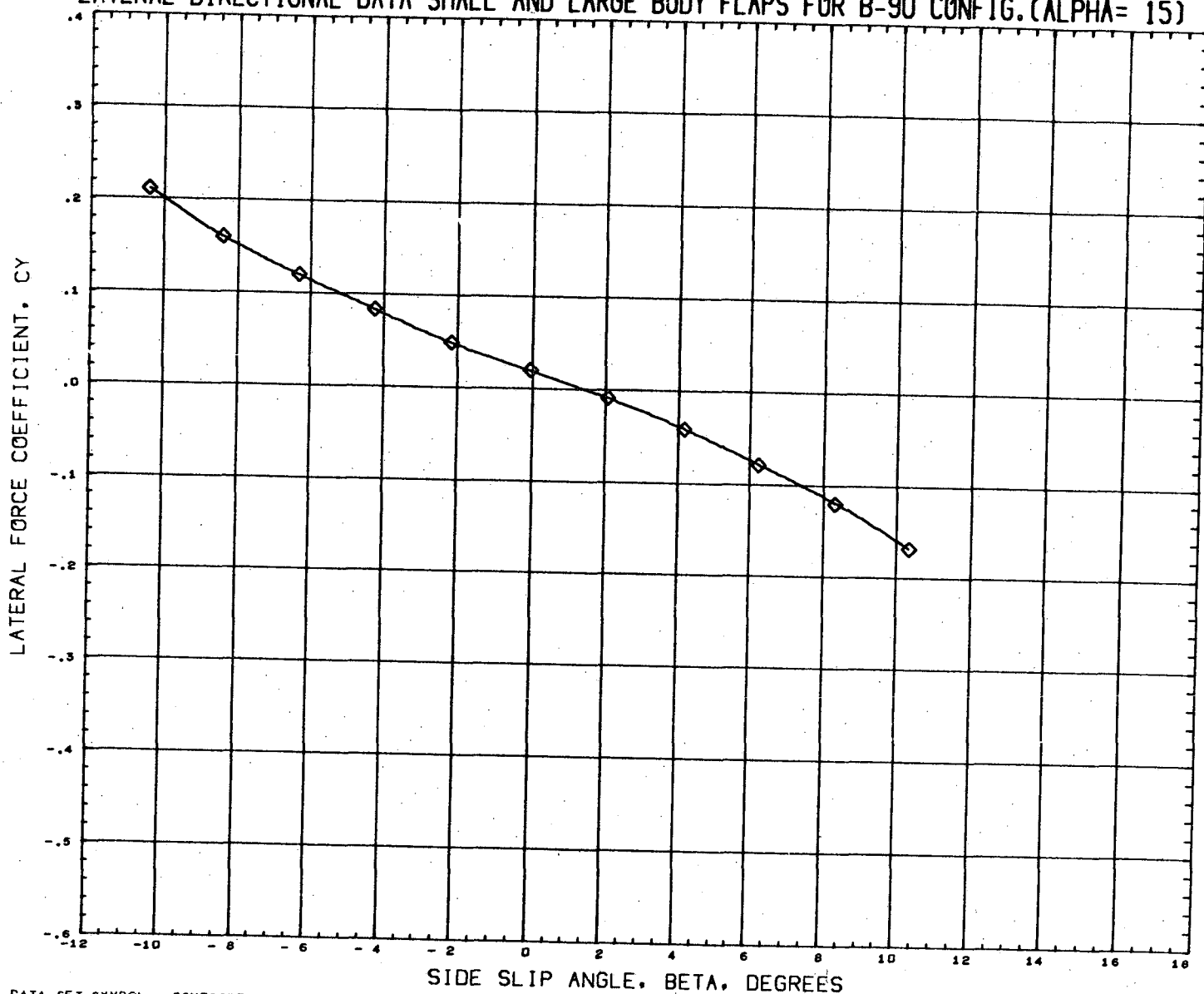
LATERAL-DIRECTIONAL LARGE BODY FLAP EFFECTIVENESS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(C350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=DF	15.000	0.000	0.000	SREF 14.9040 SQ. IN.
(Z35FCE)	MSFC TWT-493 GD/C B25W19C8F8	ALPHA=15 C=0 F=40	15.000	40.000	0.000	LREF 3.0120 IN.
						BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 1.964

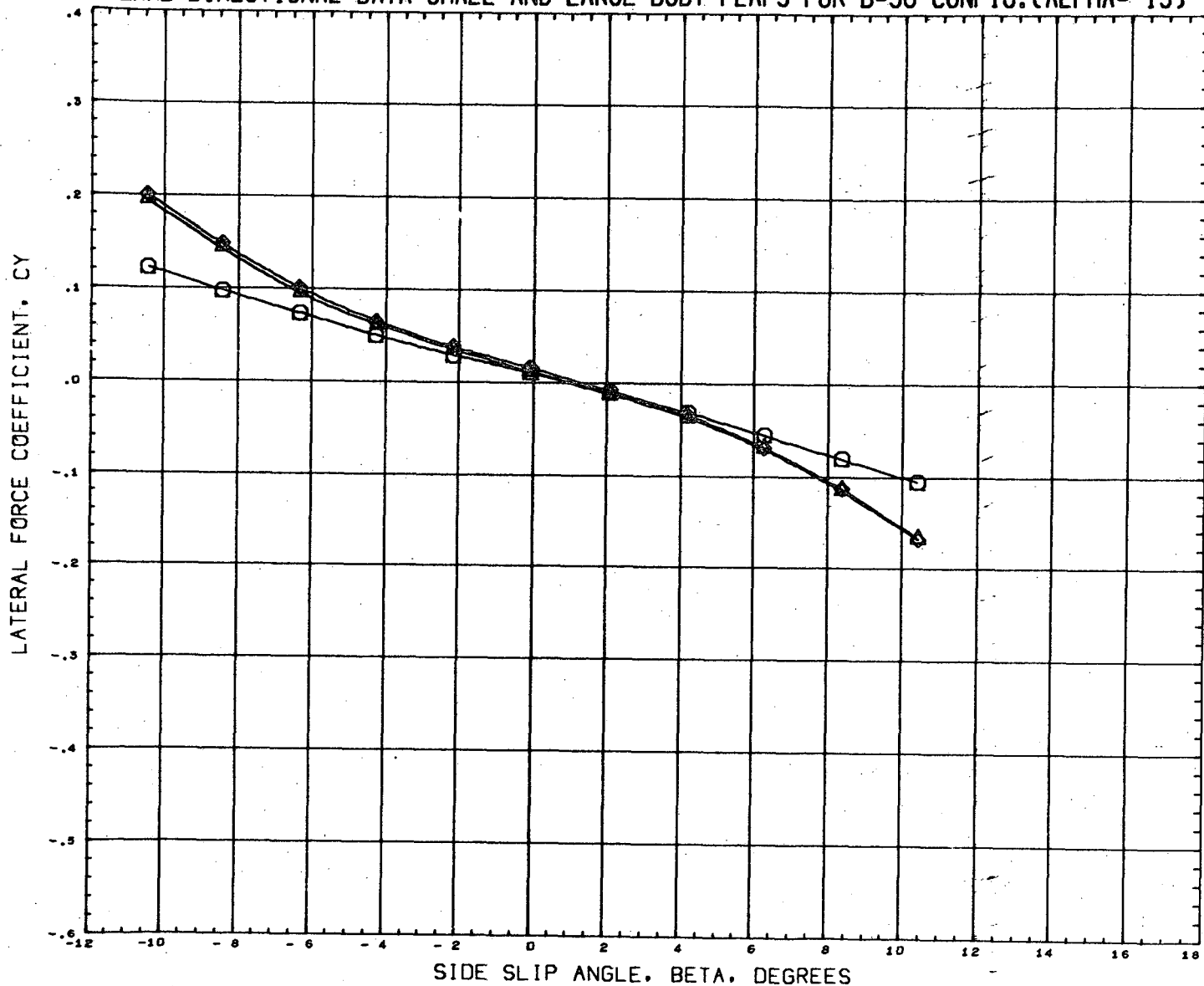
LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION	
(D35OCC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.000		0.000	0.000	SREF	14.9040 SQ. IN.
(B35FCB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.000	40.000	0.000	0.000	LREF	3.0120 IN.
(Z35FCE)	MSFC TWT-493 GD/C B25W19C8F8 ALPHA=15 C=0 F=40	15.000	40.000	0.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.000

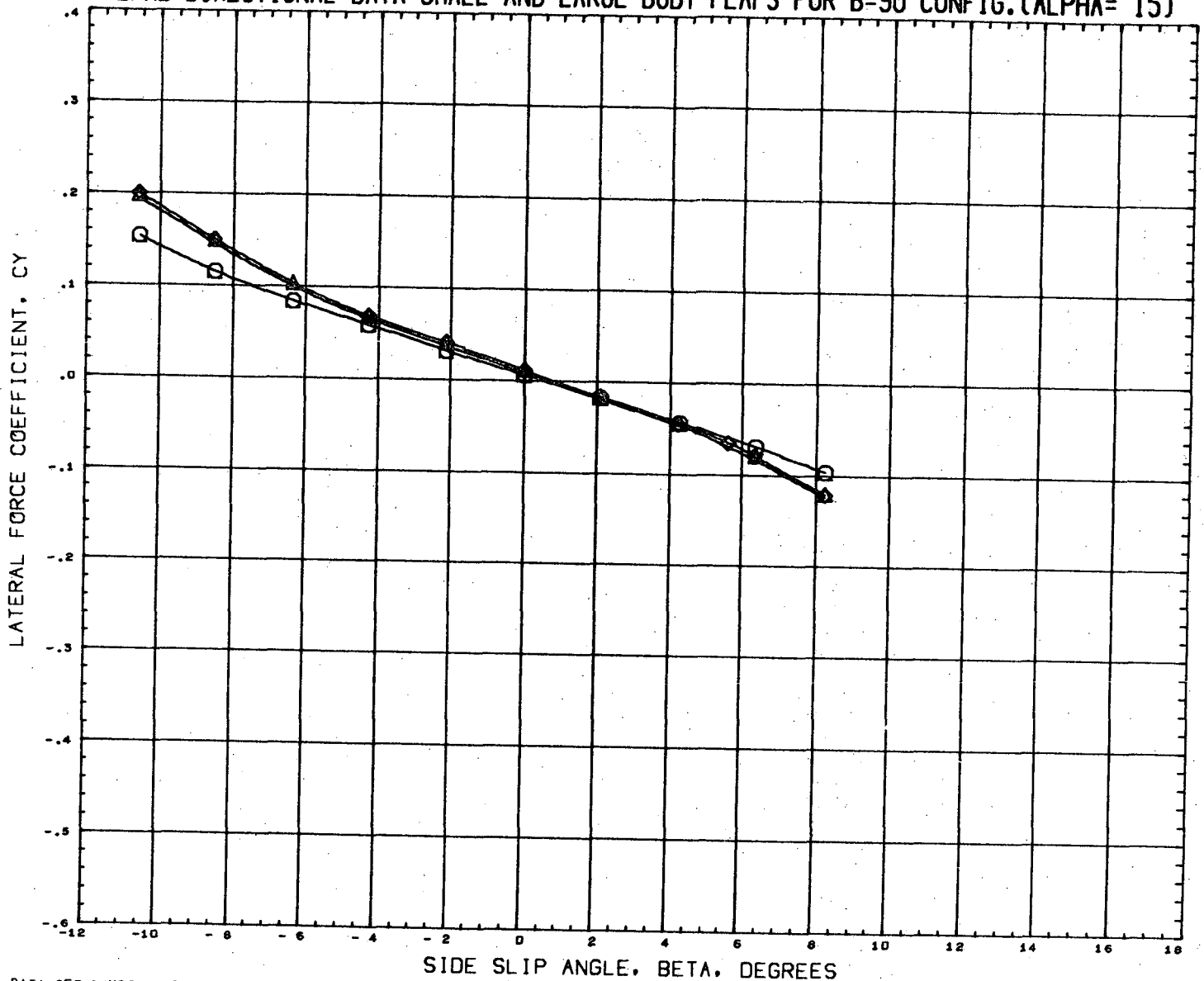
LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(D350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=DF	15.000	0.000	0.000	SREF 14.9040 SQ. IN.
(B35FCB)	MSFC TWT-493 GD/C B25W19C8F7	ALPHA=15 C=0 F=40	15.000	40.000	0.000	LREF 3.0120 IN.
(Z35FCE)	MSFC TWT-493 GD/C B25W19C8F8	ALPHA=15 C=0 F=40	15.000	40.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.192

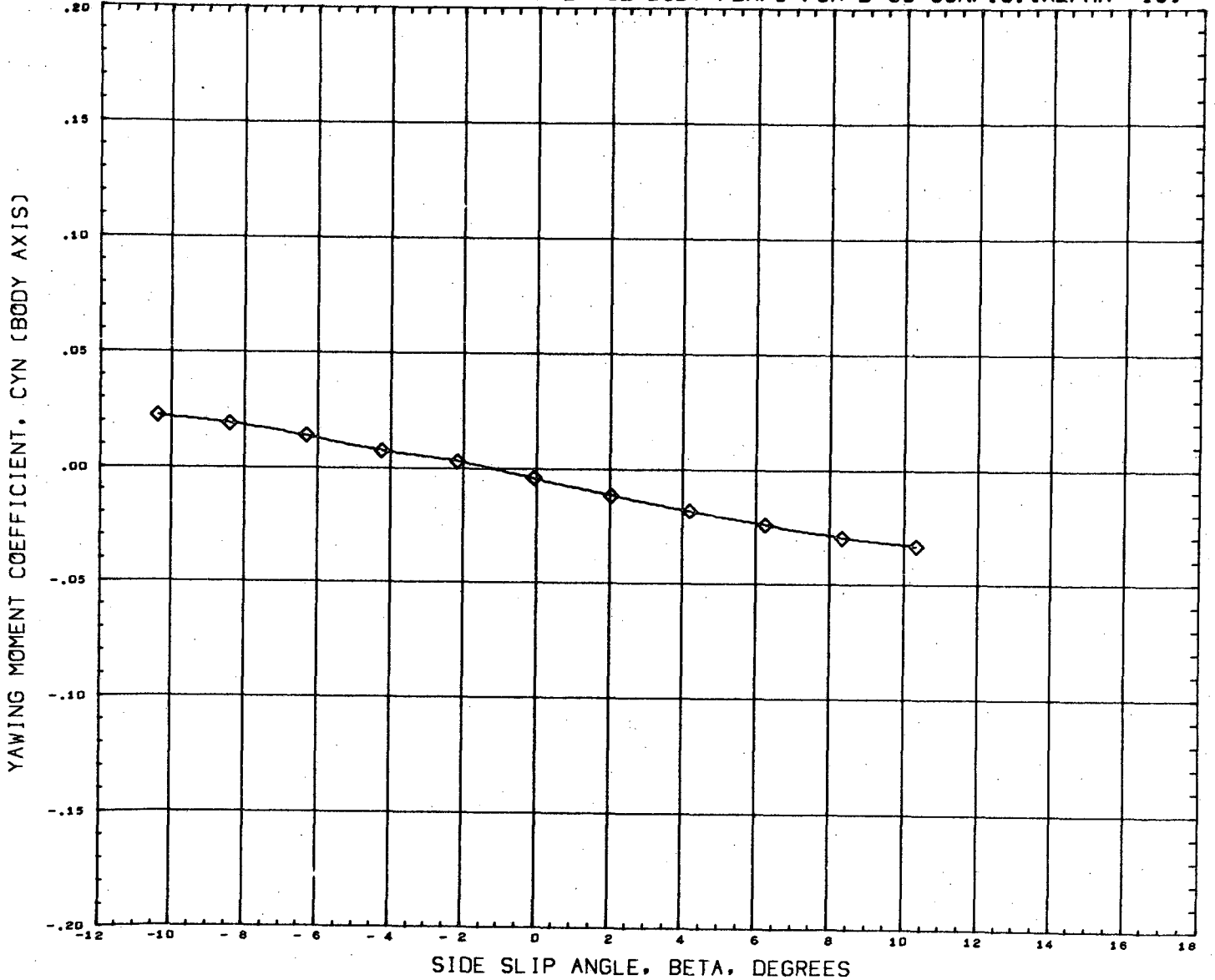
LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG.(ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(D350CC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=DF	15.000	0.000	0.000	SREF 14.9040 SQ. IN.
(B35FCB)	MSFC TWT-493 GD/C B25W19C6F7	ALPHA=15 C=D F=40	15.000	40.000	0.000	LREF 3.0120 IN.
(Z35FCE)	MSFC TWT-493 GD/C B25W19C6F8	ALPHA=15 C=D F=40	15.000	40.000	0.000	BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 1.964

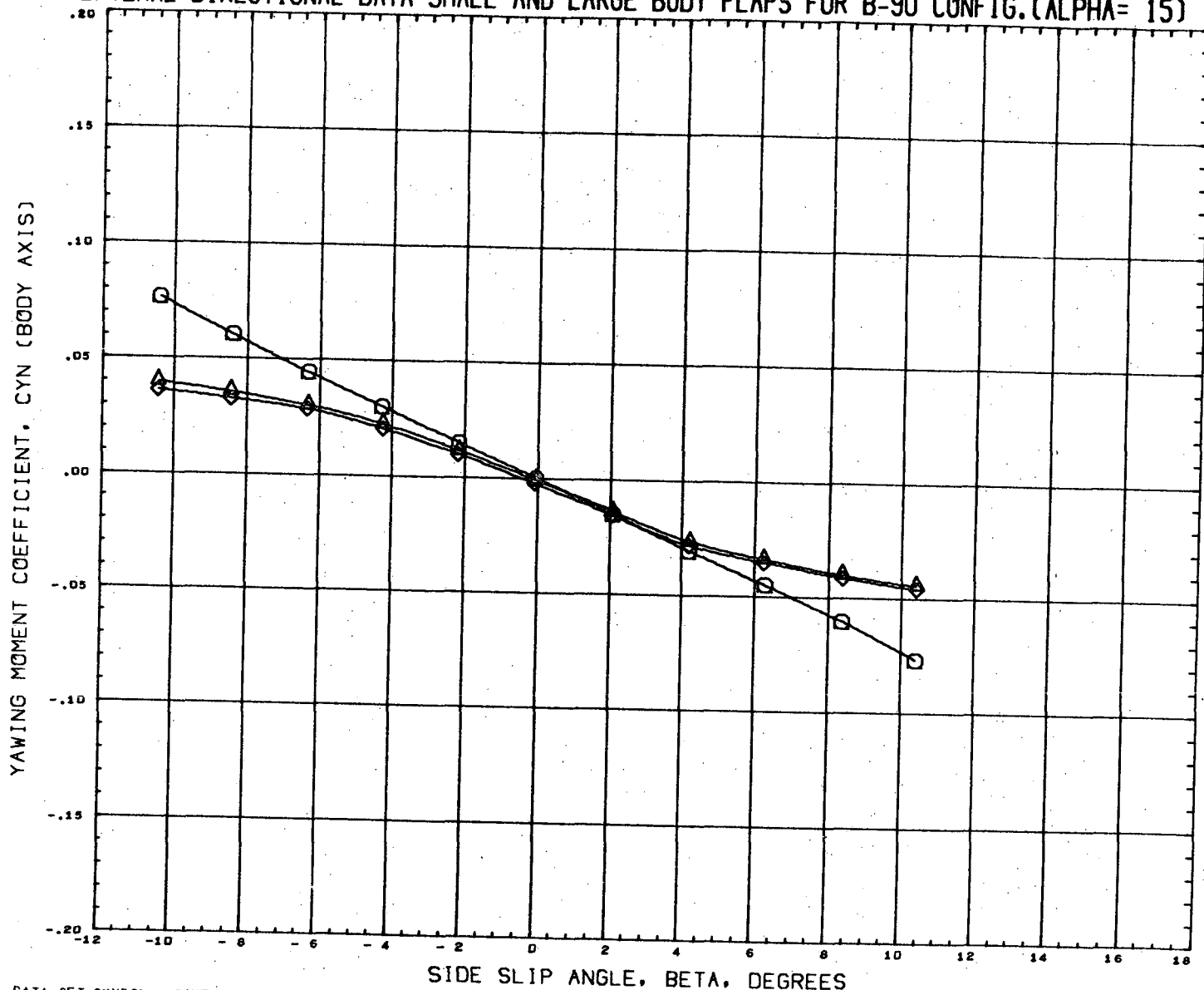
LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG.(ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION	
(D350CC)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.000		0.000	0.000	SREF	14.9040 SQ. IN.
(B35FCB)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.000	40.000	0.000	0.000	LREF	3.0120 IN.
(Z35FCE)	MSFC TWT-493 GD/C B25W19C8F8 ALPHA=15 C=0 F=40	15.000	40.000	0.000	0.000	BREF	6.0180 IN.
						XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 1.000

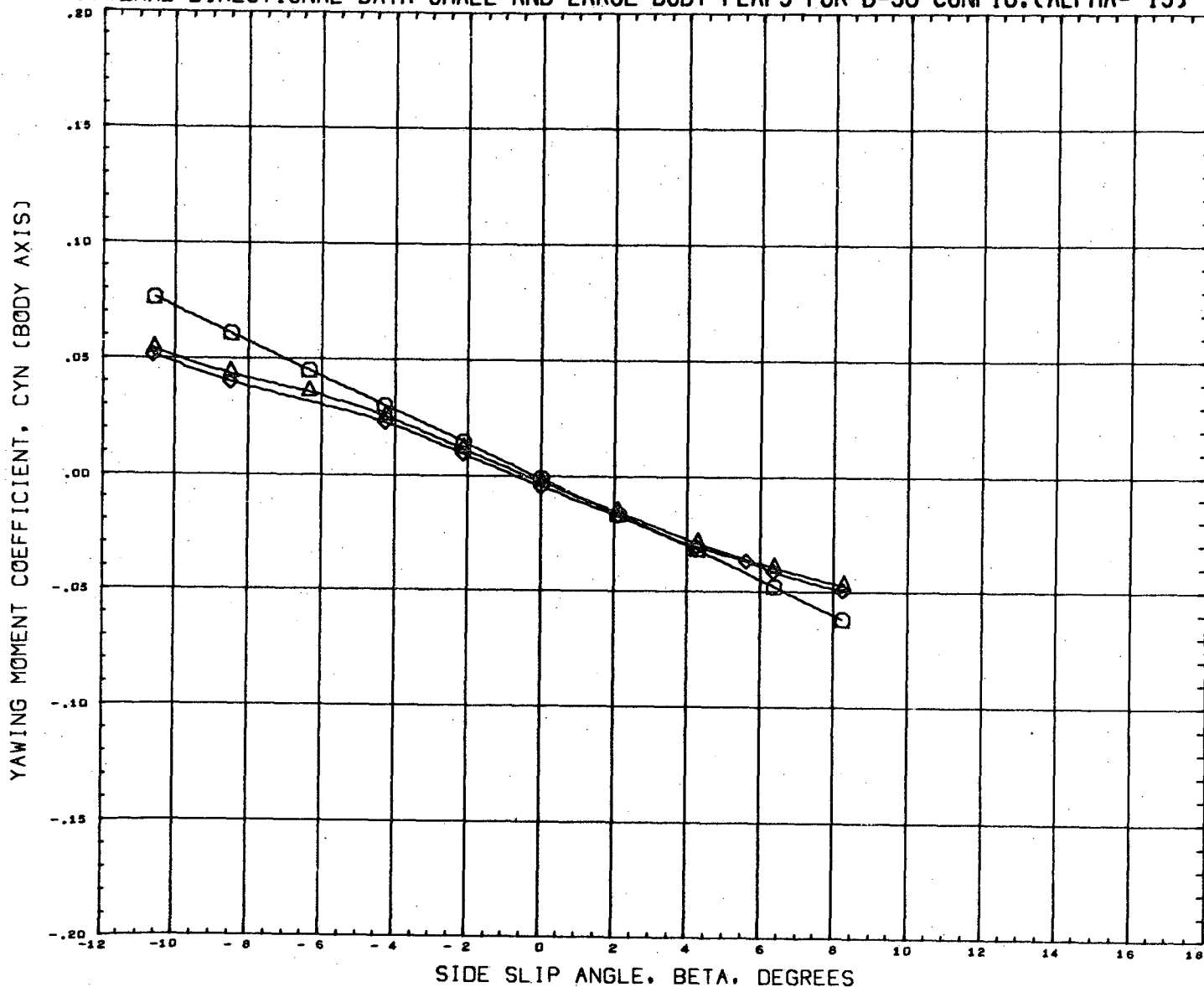
LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(D35OCC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=0R=0F	15.000	0.000	0.000	SREF 14.9040 SQ. IN.
(B35FCB)	MSFC TWT-493 GD/C B25W19C8F7	ALPHA=15 C=0 F=40	15.000	40.000	0.000	LREF 3.0120 IN.
(Z35FCE)	MSFC TWT-493 GD/C B25W19C8F8	ALPHA=15 C=0 F=40	15.000	40.000	0.000	BREF 6.0180 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 1.192

LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG.(ALPHA= 15)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(D550CC) \circ MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=DR=DF
 (B35FCB) \triangle MSFC TWT-493 GD/C B25W19C8F7 ALPHA=15 C=D F=40
 (Z35FCE) \diamond MSFC TWT-493 GD/C B25W19C8F8 ALPHA=15 C=D F=40

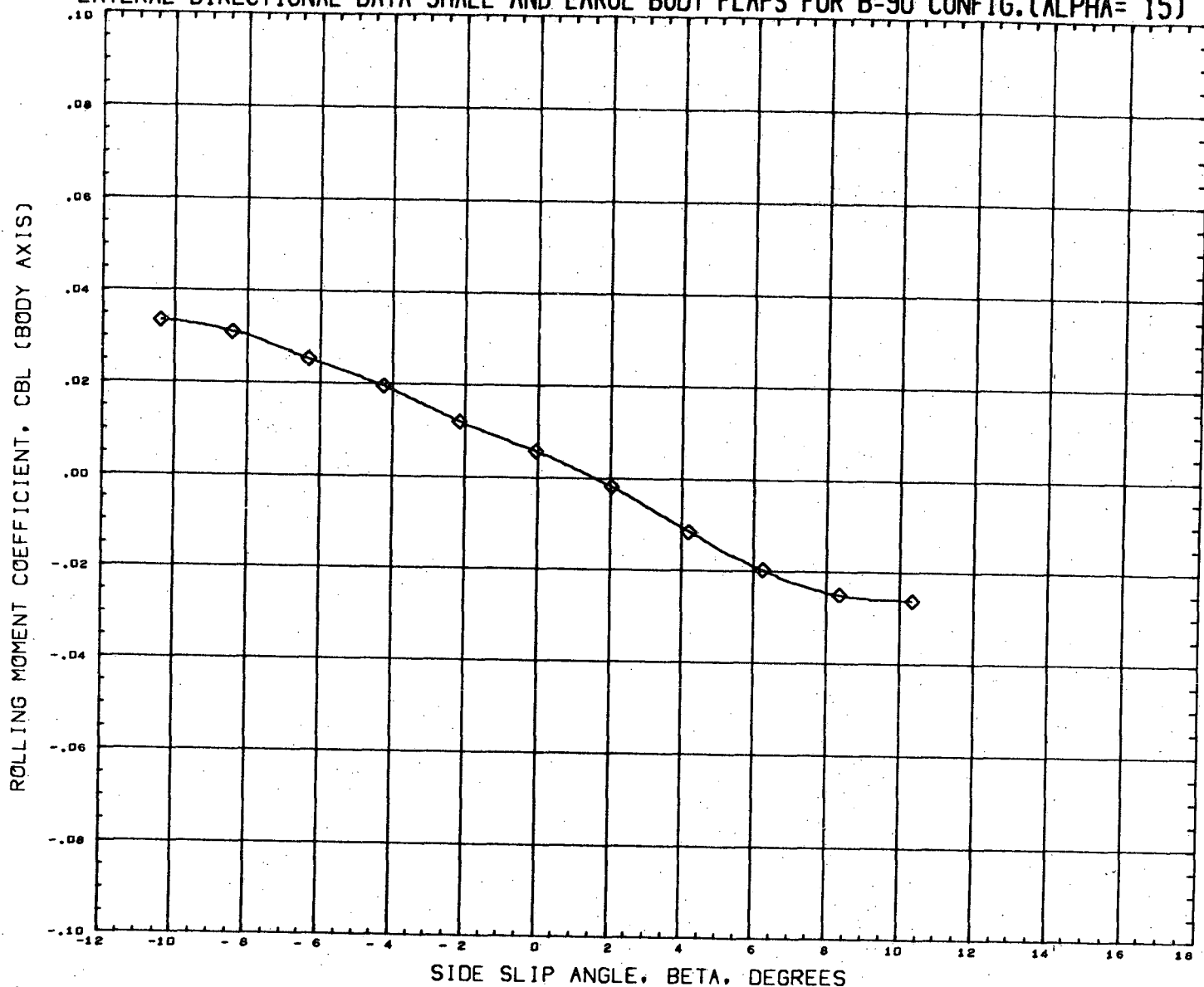
ALPHA B-FLAP ELEVON CANARD
 15.000 0.000 0.000 0.000
 15.000 40.000 0.000 0.000
 15.000 40.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH

1.964

LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG.(ALPHA= 15)



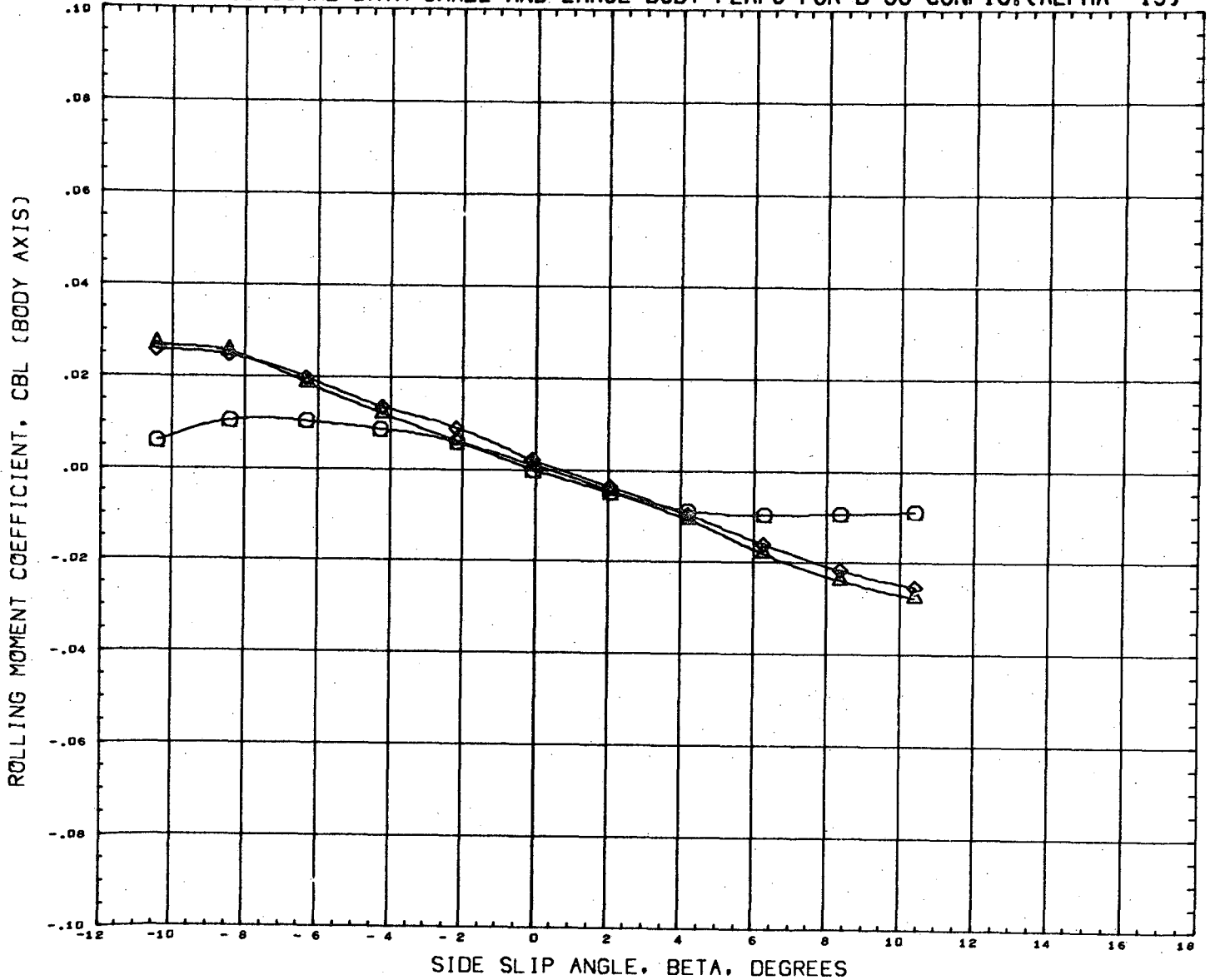
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(D350CC) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (B35FCB) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (Z35FCE) MSFC TWT-493 GD/C B25W19C8F8 ALPHA=15 C=0 F=40

ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
15.000		0.000	0.000	SREF 14.9040 SQ. IN.
15.000	40.000	0.000	0.000	LREF 3.0120 IN.
15.000	40.000	0.000	0.000	BREF 6.0180 IN.
				XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

MACH 1.000

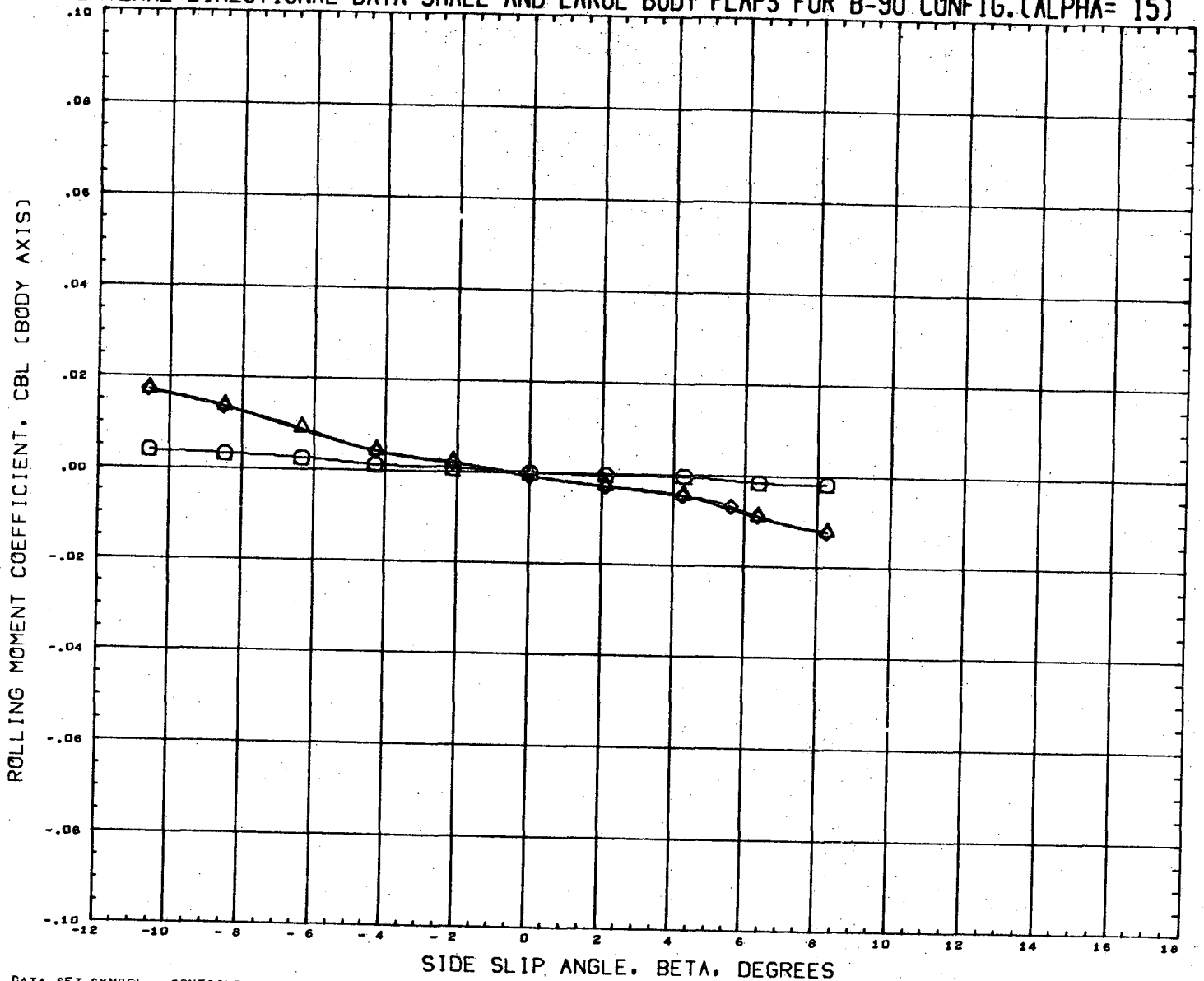
LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG.(ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION	
(D35OCC)	MSFC TWT-493 GD/C B25W19C8	ALPHA=15 C=DR=DF	15.000	0.000	0.000	SREF	14.9040 SQ.IN.
(B35FCB)	MSFC TWT-493 GD/C B25W19C8F7	ALPHA=15 C=D F=4D	15.000	40.000	0.000	LREF	3.0120 IN.
(Z35FCE)	MSFC TWT-493 GD/C B25W19C8F8	ALPHA=15 C=D F=4D	15.000	40.000	0.000	BREF	6.0180 IN.
						XMRF	7.2990 IN.
						YMRF	0.0000 IN.
						ZMRF	0.0000 IN.
						SCALE	0.0035

MACH 1.192

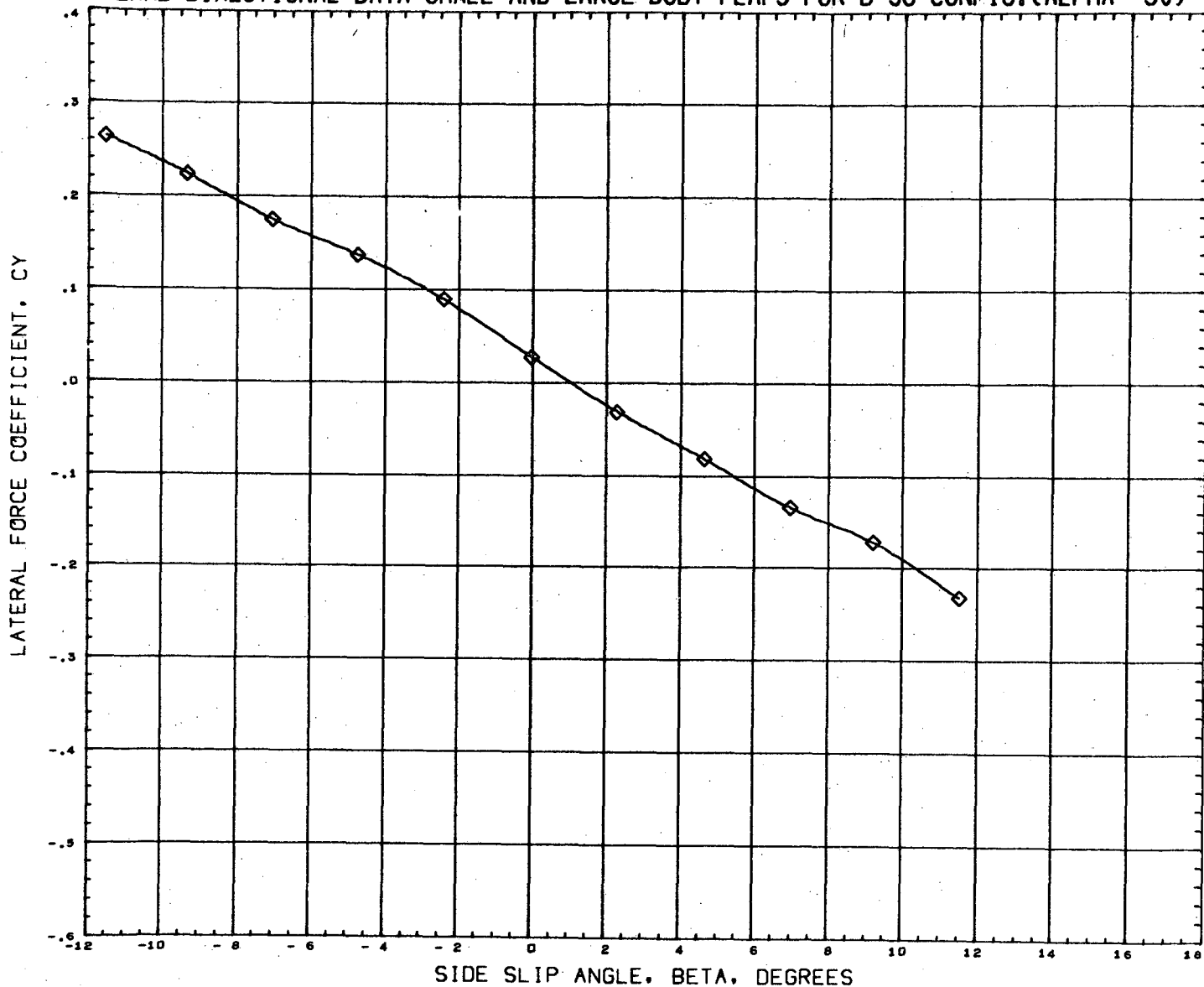
LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG. (ALPHA= 15)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(D350CC)	MSFC TWT-493 GD/C B25W19C8 ALPHA=15 C=0R=0F	15.000		0.000	0.000	SREF 14.9040 SQ. IN.
(B35FCB)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=15 C=0 F=40	15.000	40.000	0.000	0.000	LREF 3.0120 IN.
(Z35FCE)	MSFC TWT-493 GD/C B25W19C8F8 ALPHA=15 C=0 F=40	15.000	40.000	0.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.964

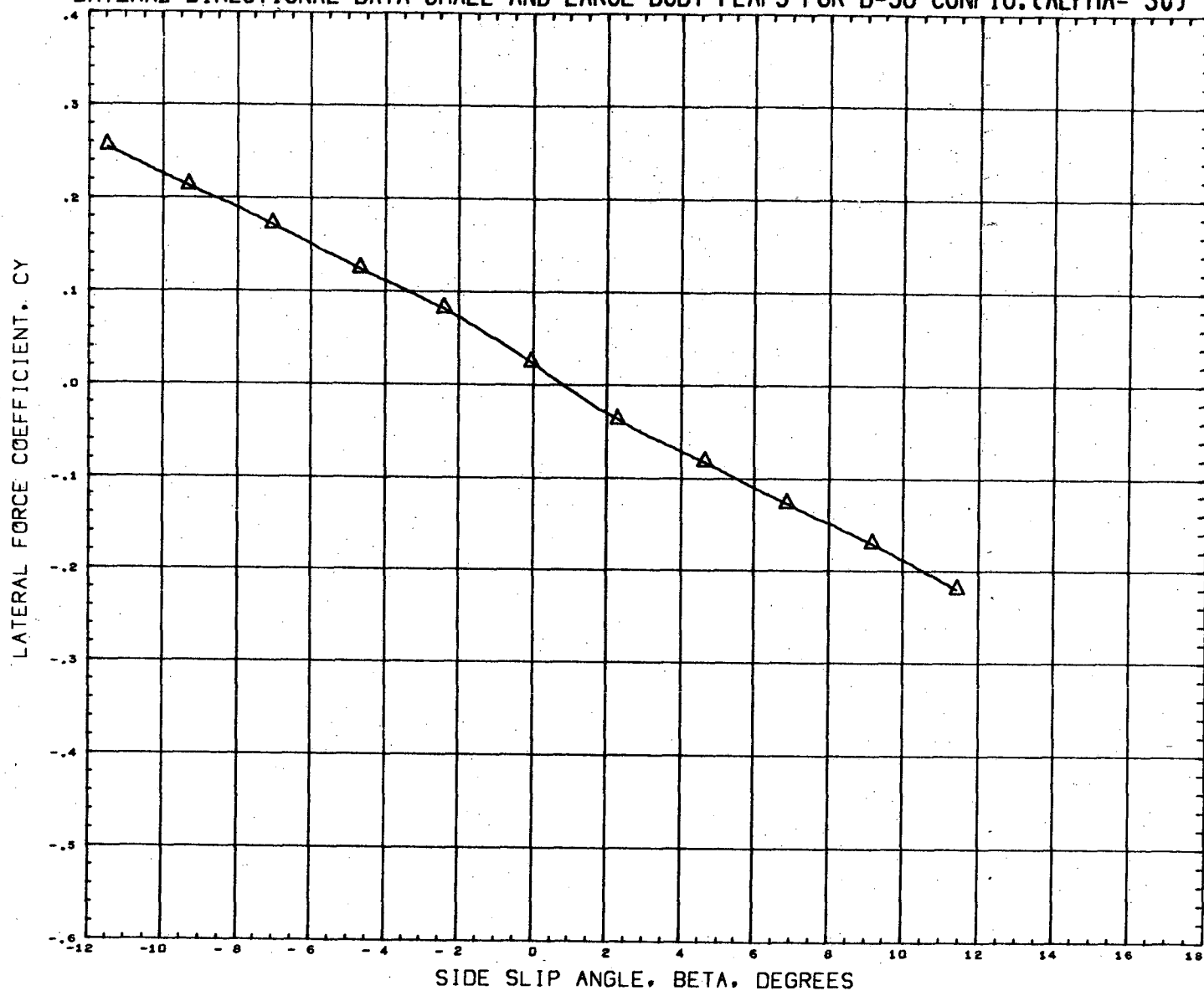
LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION	
(B35OCA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000		0.000	0.000	SREF	14.9040 SQ. IN.
(A35FCA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	40.000	0.000	0.000	LREF	3.0120 IN.
(A35FCD)	MSFC TWT-493 GD/C B25W19C8F8 ALPHA=30 C=0 F=40	30.000	40.000	0.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.947

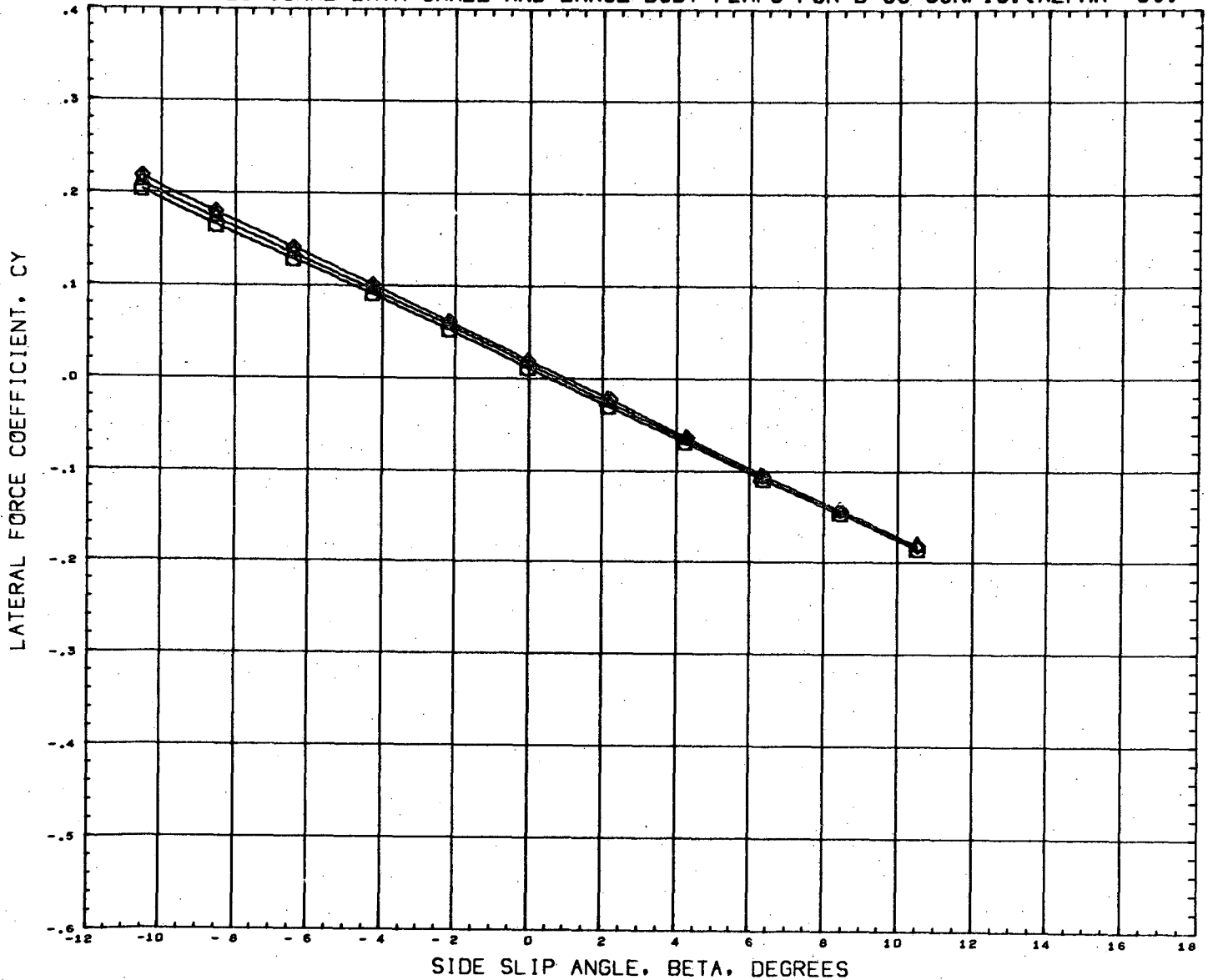
LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION	
(B35OCA)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000		0.000	0.000	SREF	14.9040 SQ. IN.
(A35FCA)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=40	30.000	40.000	0.000	0.000	LREF	3.0120 IN.
(A35FCD)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	40.000	0.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.972

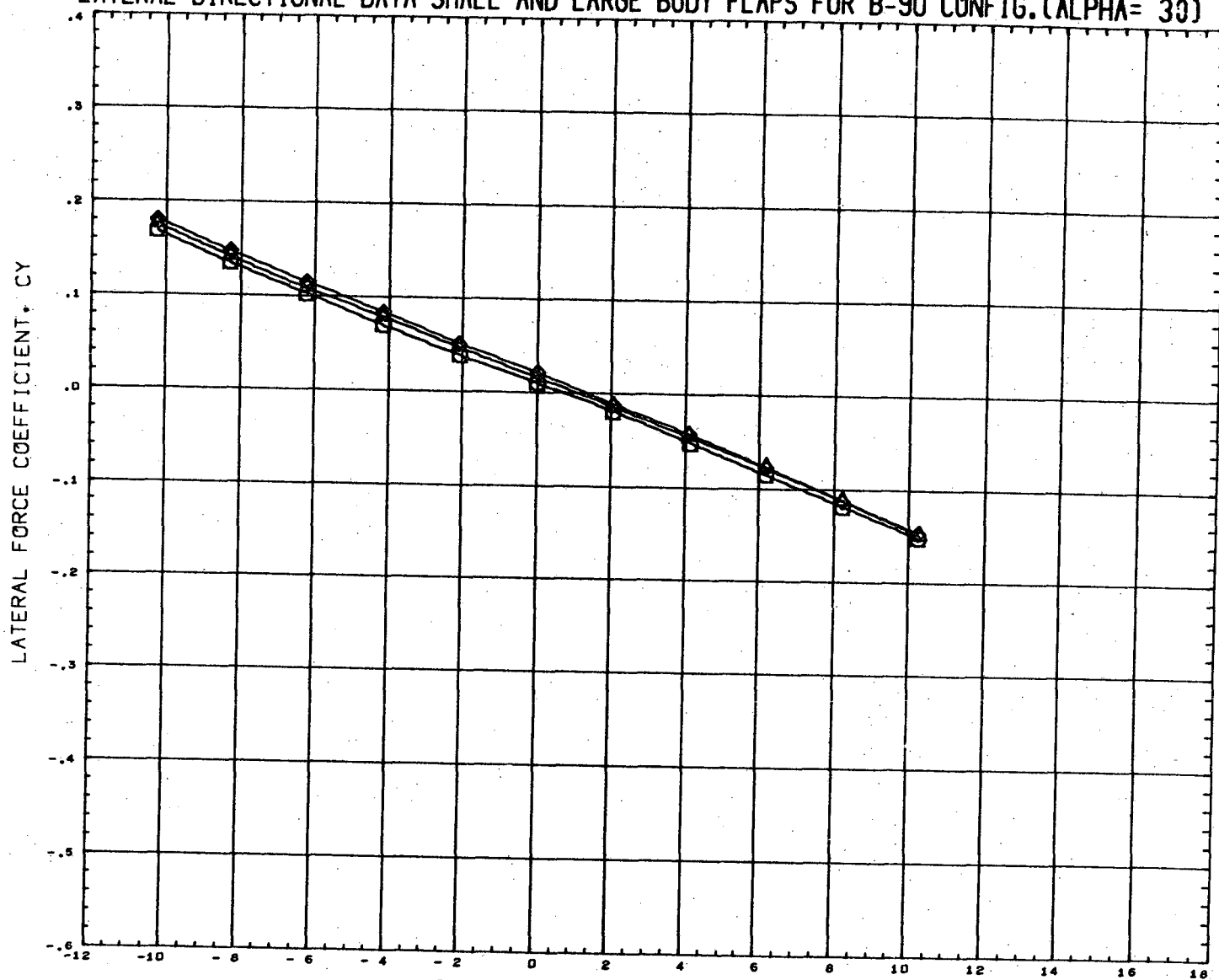
LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(B35OCA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=D R=0	30.000	0.000	0.000	0.000	SREF 14.9040 SQ. IN.
(A35FCA)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=D F=40	30.000	40.000	0.000	0.000	LREF 3.0120 IN.
(A35FCD)	MSFC TWT-493 GD/C B25W19C8F8 ALPHA=30 C=D F=40	30.000	40.000	0.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 2.990

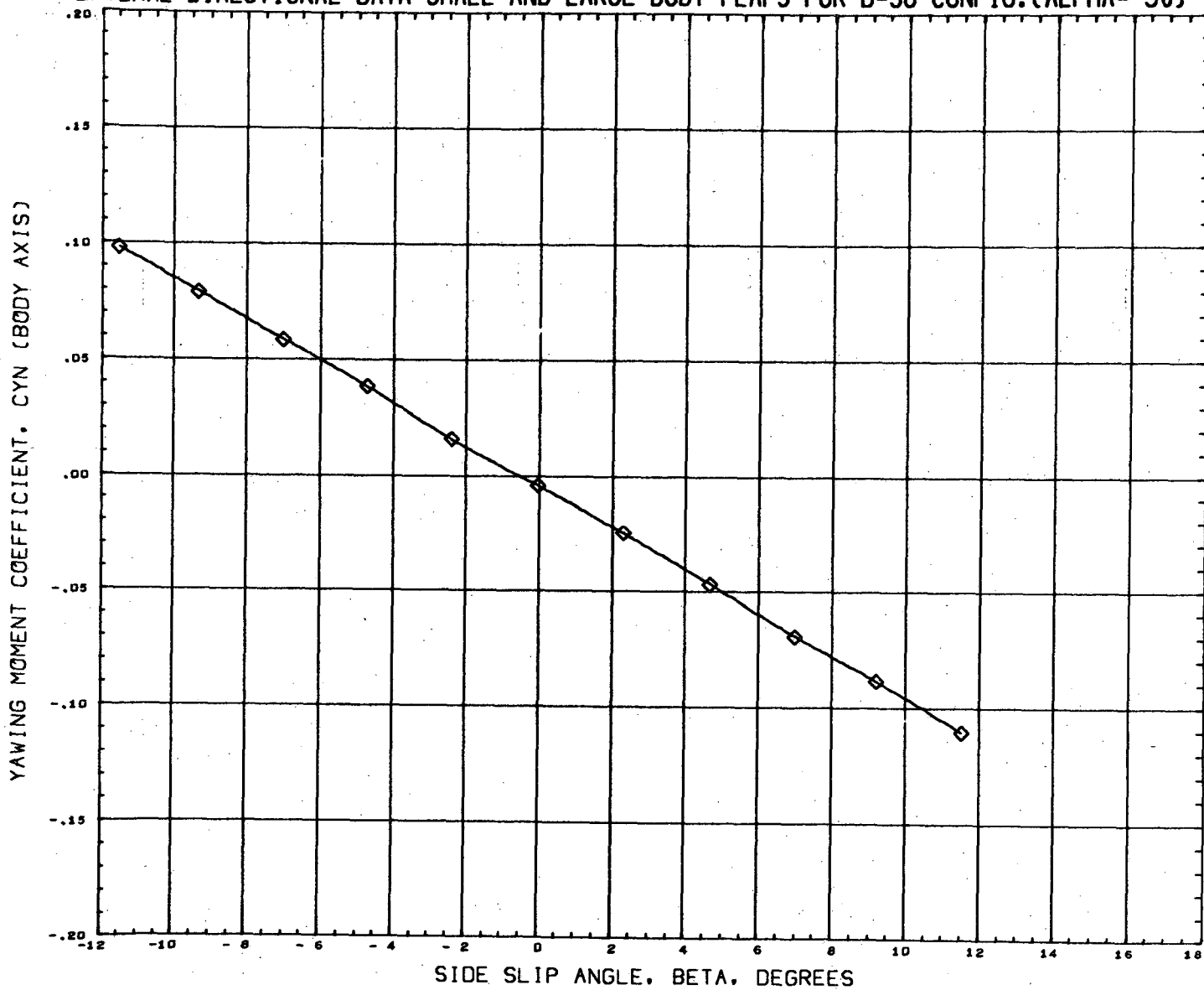
LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG.(ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION	
(B350CA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=0 R=0	30.000		0.000	0.000	SREF	14.9040 SQ. IN.
(A35FCA)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=40	30.000	40.000	0.000	0.000	LREF	3.0120 IN.
(A35FCD)	MSFC TWT-493 GD/C B25W19C8F8 ALPHA=30 C=0 F=40	30.000	40.000	0.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 4.959

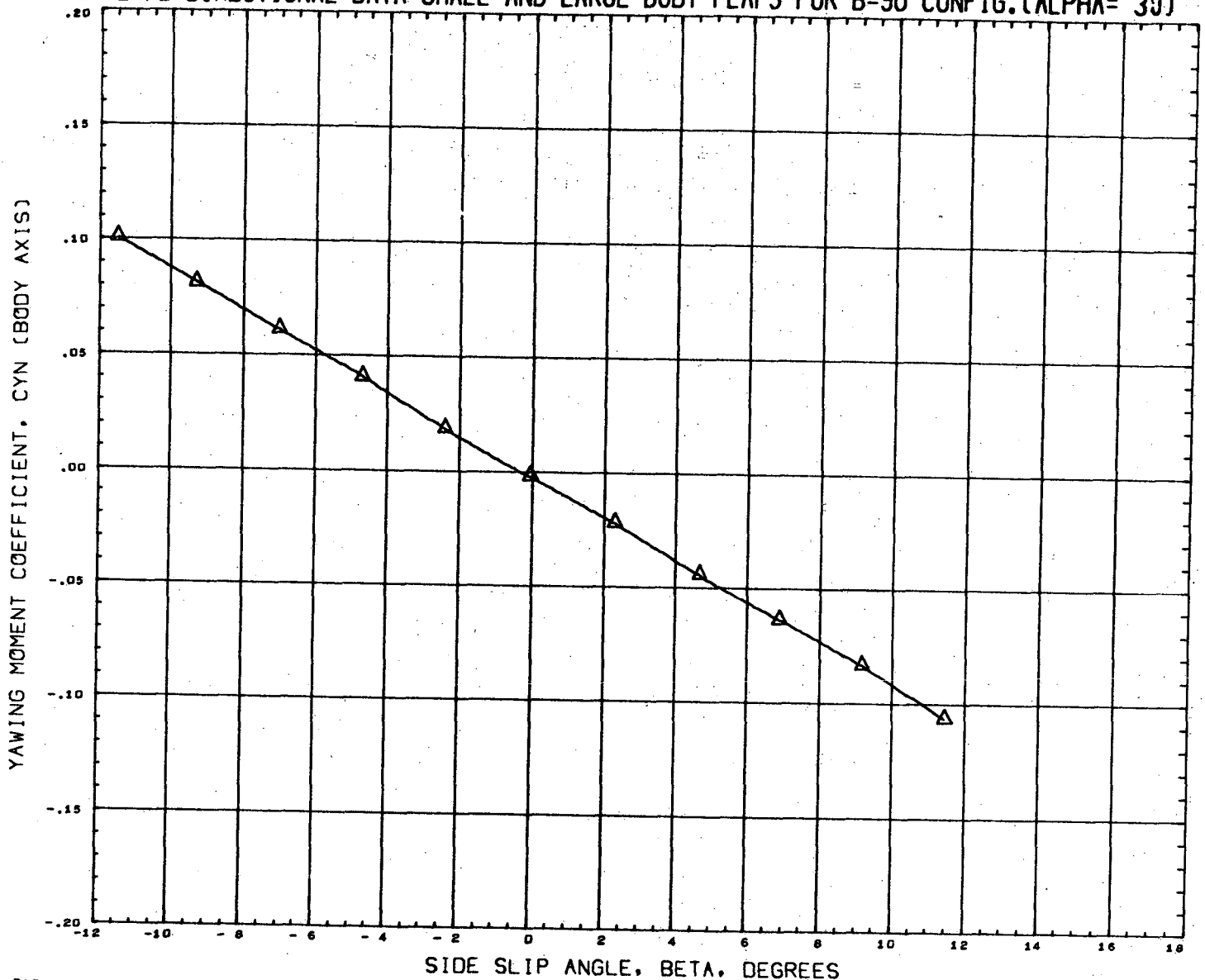
LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION	
(B35OCA)	DATA NOT AVAILABLE FOR ALL CONDITIONS.	30.000		0.000	0.000	SREF	14.9040 SQ. IN.
(A35FCA)	DATA NOT AVAILABLE FOR ALL CONDITIONS.	30.000	40.000	0.000	0.000	LREF	3.0120 IN.
(A35FCD)	MSFC TWT-493 GD/C B25W19C0F8 ALPHA=30 C=0 F=40	30.000	40.000	0.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 1.947

LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG. (ALPHA= 30)



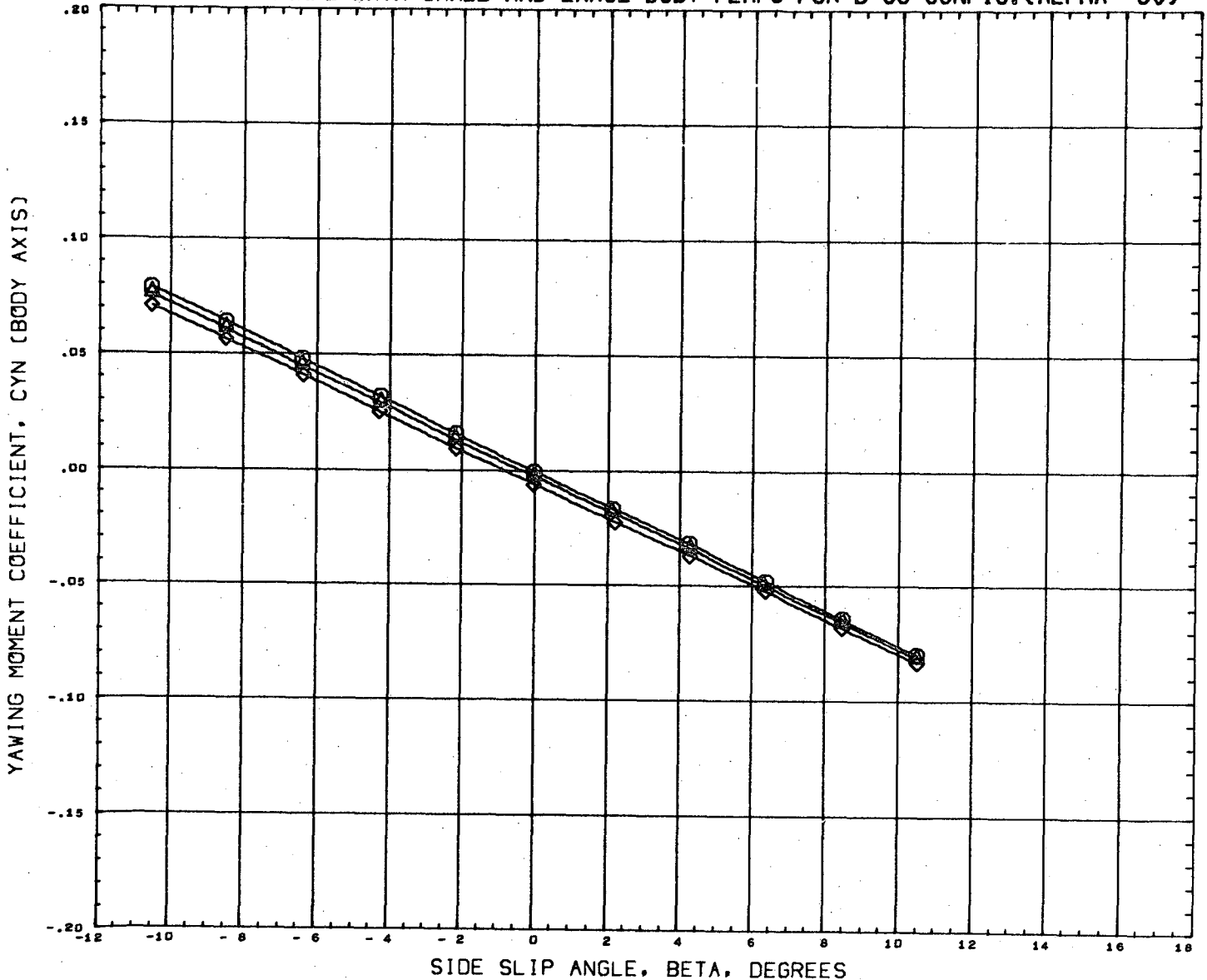
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B350CA) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (A35FCA) MSFC TWT-493 CD/C B25W19C8F7 ALPHA=30 C=0 F=40
 (A35FCD) DATA NOT AVAILABLE FOR ALL CONDITIONS

ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
30.000		0.000	0.000	SREF 14.9040 50. IN.
30.000	40.000	0.000	0.000	LREF 3.0120 IN.
30.000	40.000	0.000	0.000	BREF 6.0180 IN.
				XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

MACH 1.972

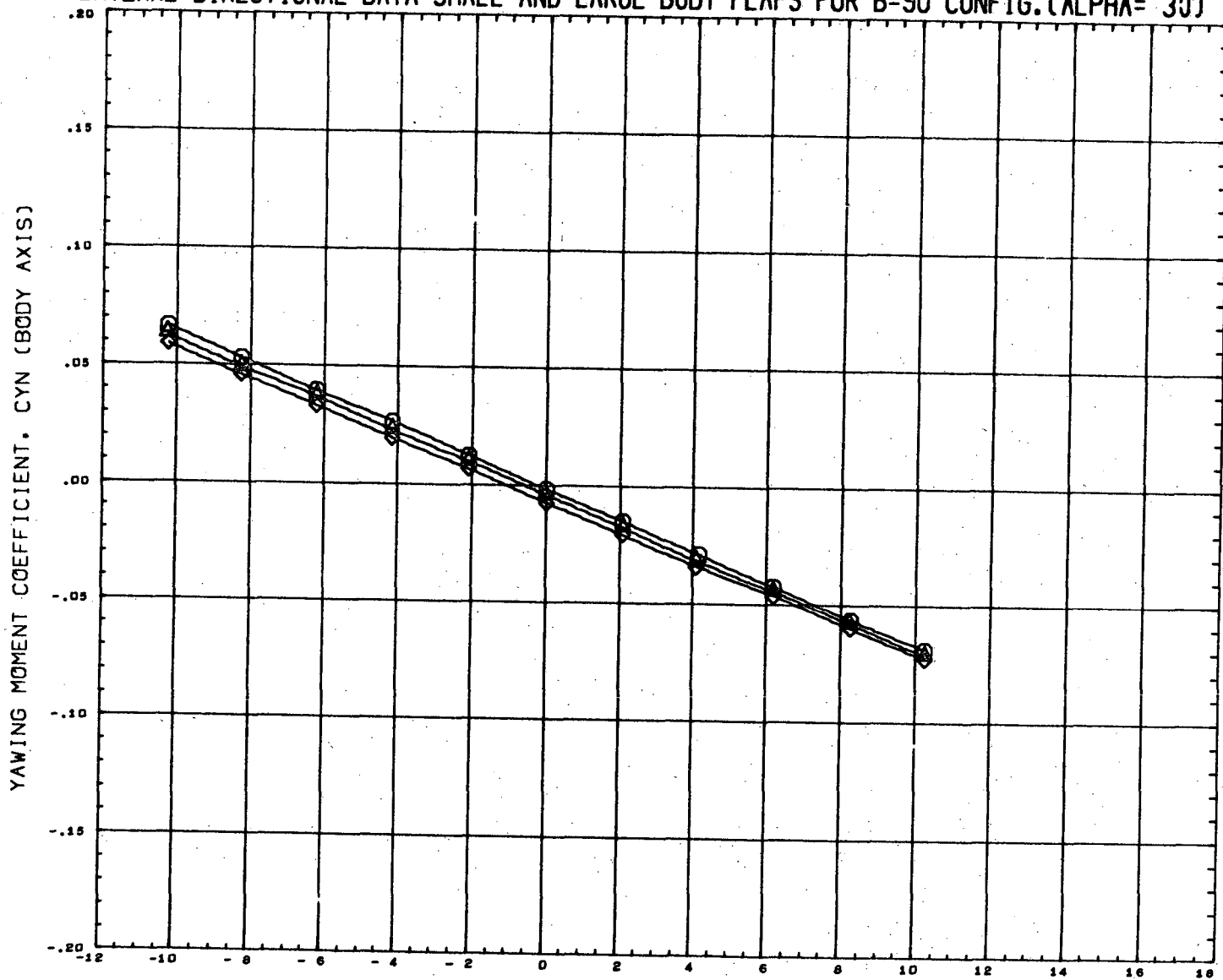
LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(B35OCA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=0 R=0	30.000		0.000	0.000	SREF 14.9040 SQ. IN.
(A35FCA)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=40	30.000	40.000	0.000	0.000	LREF 3.0120 IN.
(A35FCD)	MSFC TWT-493 GD/C B25W19C8F8 ALPHA=30 C=0 F=40	30.000	40.000	0.000	0.000	BREF 6.0160 IN.
						XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 2.990

LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG.(ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B350CA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=D R=D
(A35FCA)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=D F=40
(A35FCD)	MSFC TWT-493 GD/C B25W19C8F8 ALPHA=30 C=D F=40

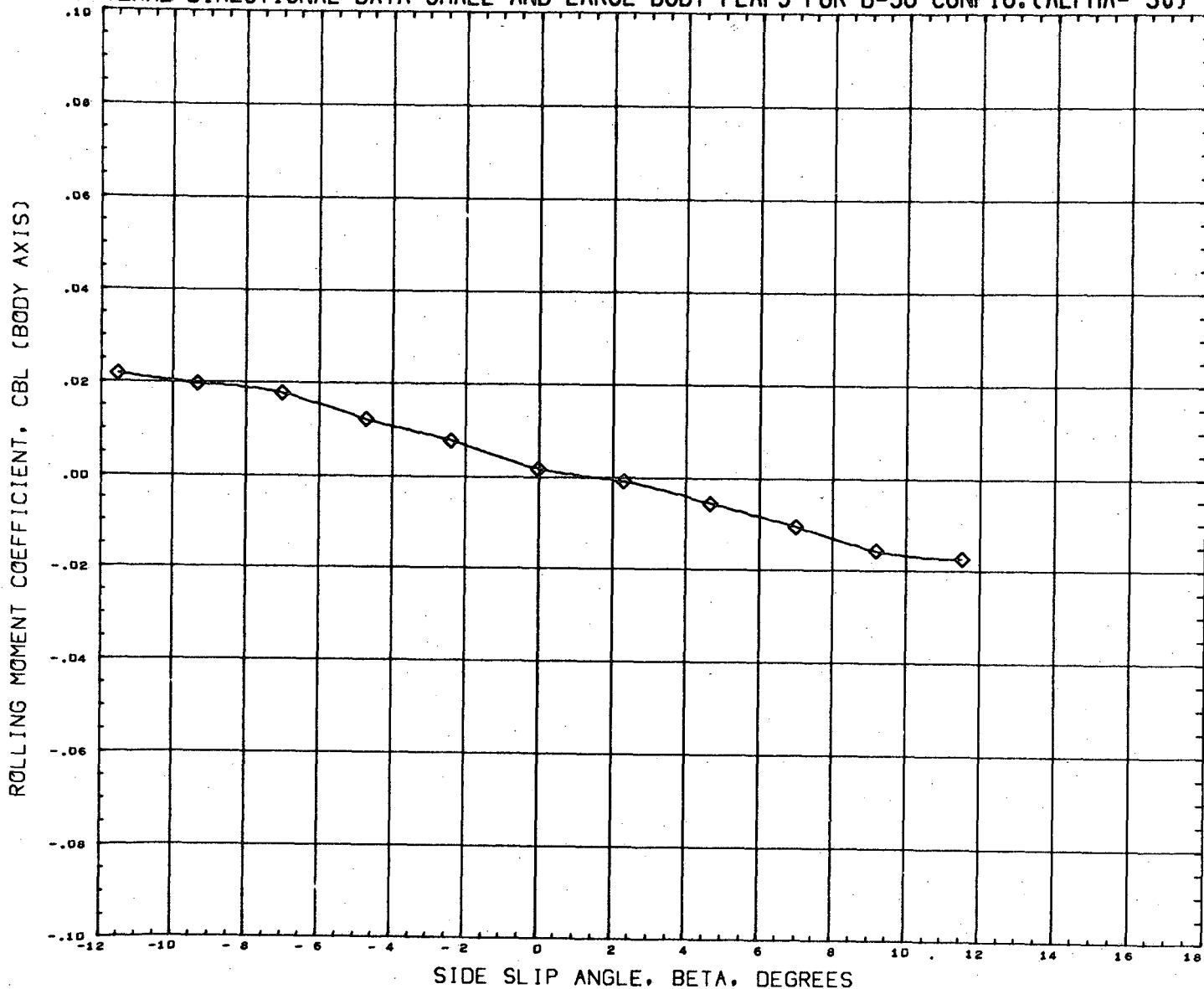
SIDE SLIP ANGLE, BETA, DEGREES

ALPHA	B-FLAP	ELEVON	CANARD
30.000	0.000	0.000	0.000
30.000	40.000	0.000	0.000
30.000	40.000	0.000	0.000




REFERENCE INFORMATION	
SREF	14.9040 SQ. IN.
LREF	3.0120 IN.
BREF	6.0180 IN.
XMRP	7.2990 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0035

MACH 4.959

LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG.(ALPHA= 30)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

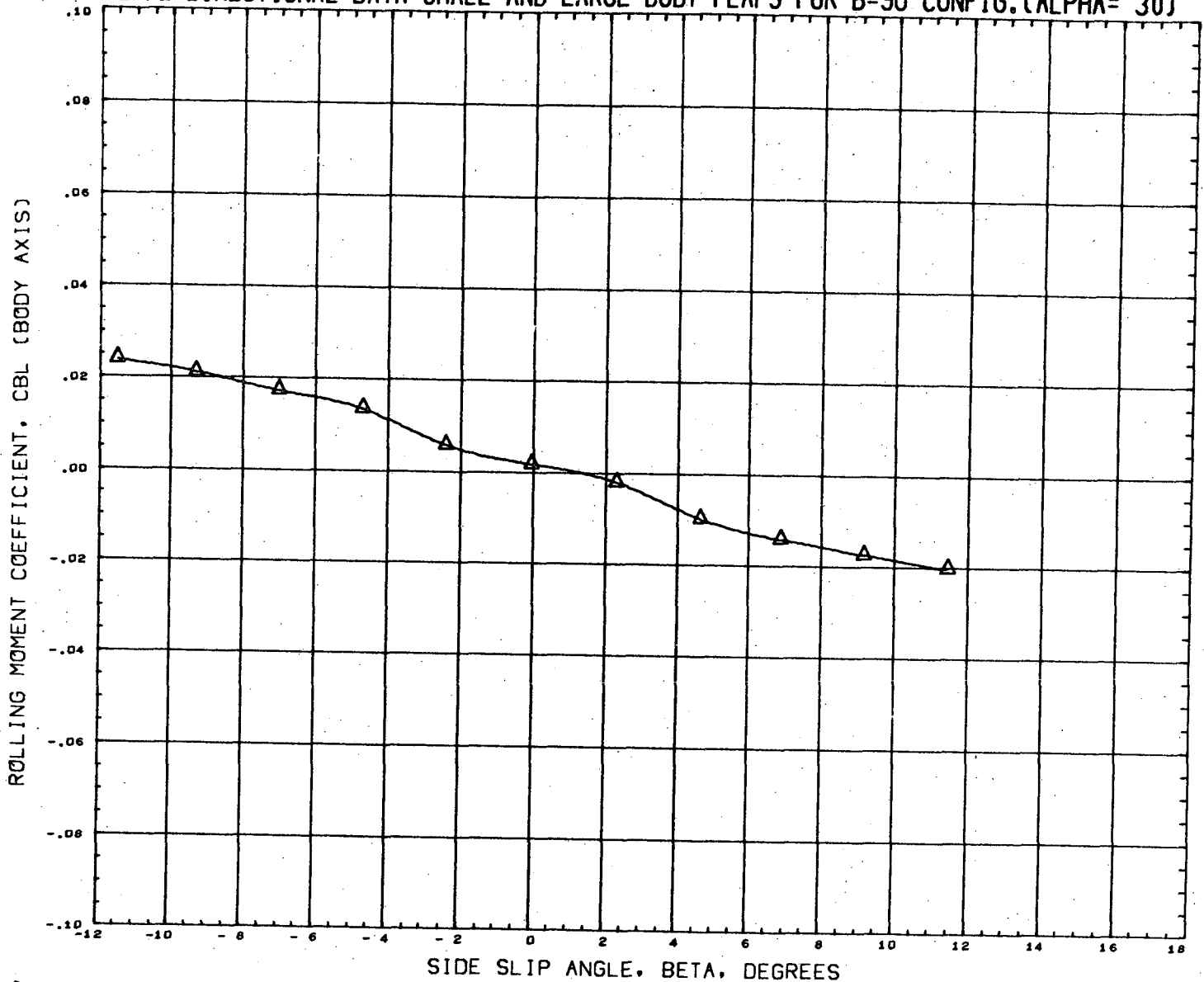
(B350CA)  DATA NOT AVAILABLE FOR ALL CONDITIONS
 (A35FCA)  DATA NOT AVAILABLE FOR ALL CONDITIONS
 (A35FCD)  MSFC TWT-493 GD/C B25W19C8F8 ALPHA=30 C=0 F=40

ALPHA	B-FLAP	ELEVON	CANARD
30.000		0.000	0.000
30.000	40.000	0.000	0.000
30.000	40.000	0.000	0.000

REFERENCE INFORMATION		
SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRP	7.2990	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0035	

MACH 1.947

LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG. (ALPHA= 30)



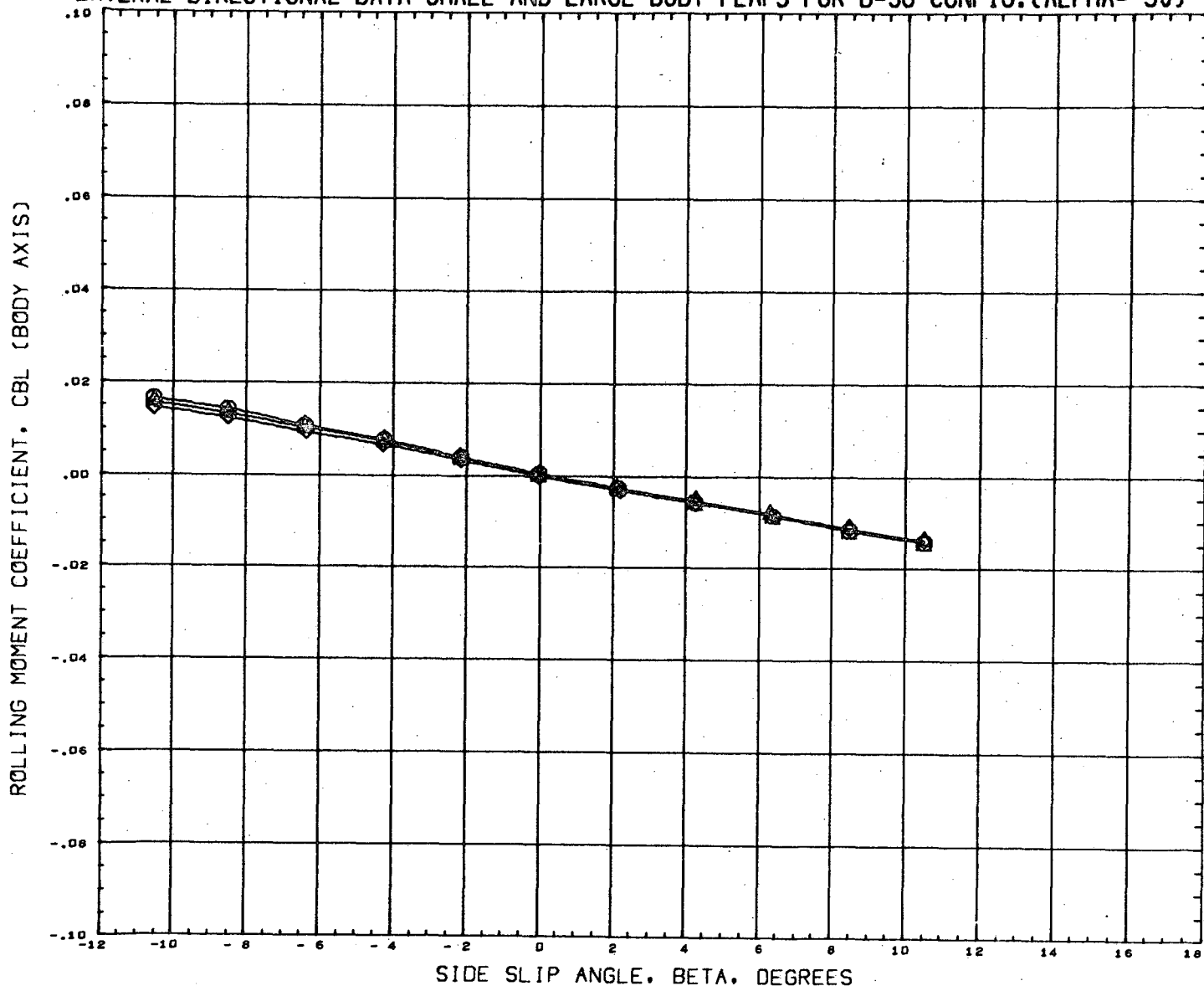
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B350CA) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (A35FCA) MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=D F=40
 (A35FCD) DATA NOT AVAILABLE FOR ALL CONDITIONS

ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
30.000		0.000	0.000	SREF 14.9040 SQ. IN.
30.000	40.000	0.000	0.000	LREF 3.0120 IN.
30.000	40.000	0.000	0.000	BREF 6.0180 IN.
				XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

MACH 1.972

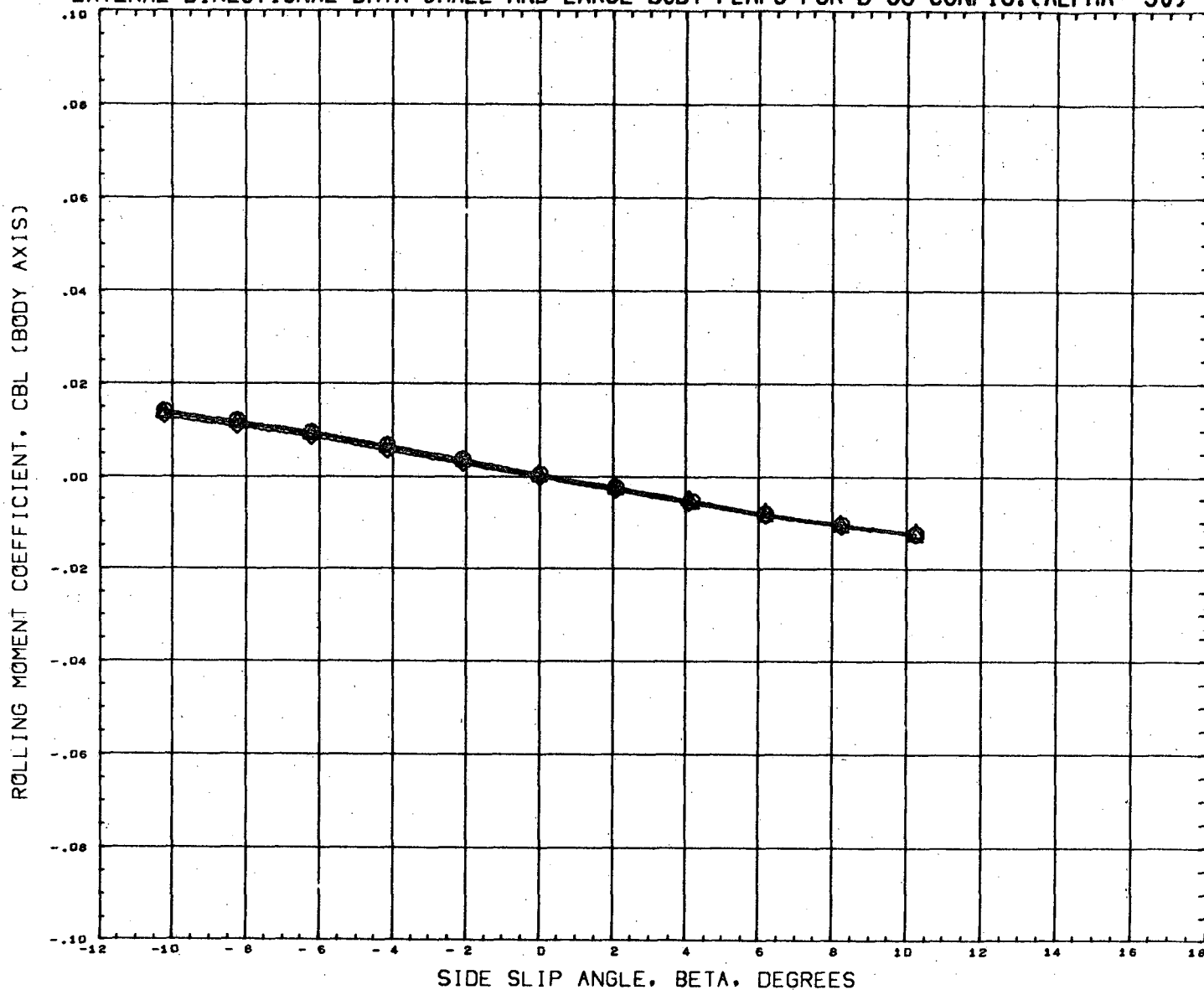
LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION
(B350CA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=0 R=0	30.000		0.000	0.000	SREF 14.9040 SQ. IN.
(A35FCA)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=0 F=40	30.000	40.000	0.000	0.000	LREF 3.0120 IN.
(A35FCD)	MSFC TWT-493 GD/C B25W19C8F8 ALPHA=30 C=0 F=40	30.000	40.000	0.000	0.000	BREF 6.0180 IN.
						XMRF 7.2980 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035 IN.

MACH 2.990

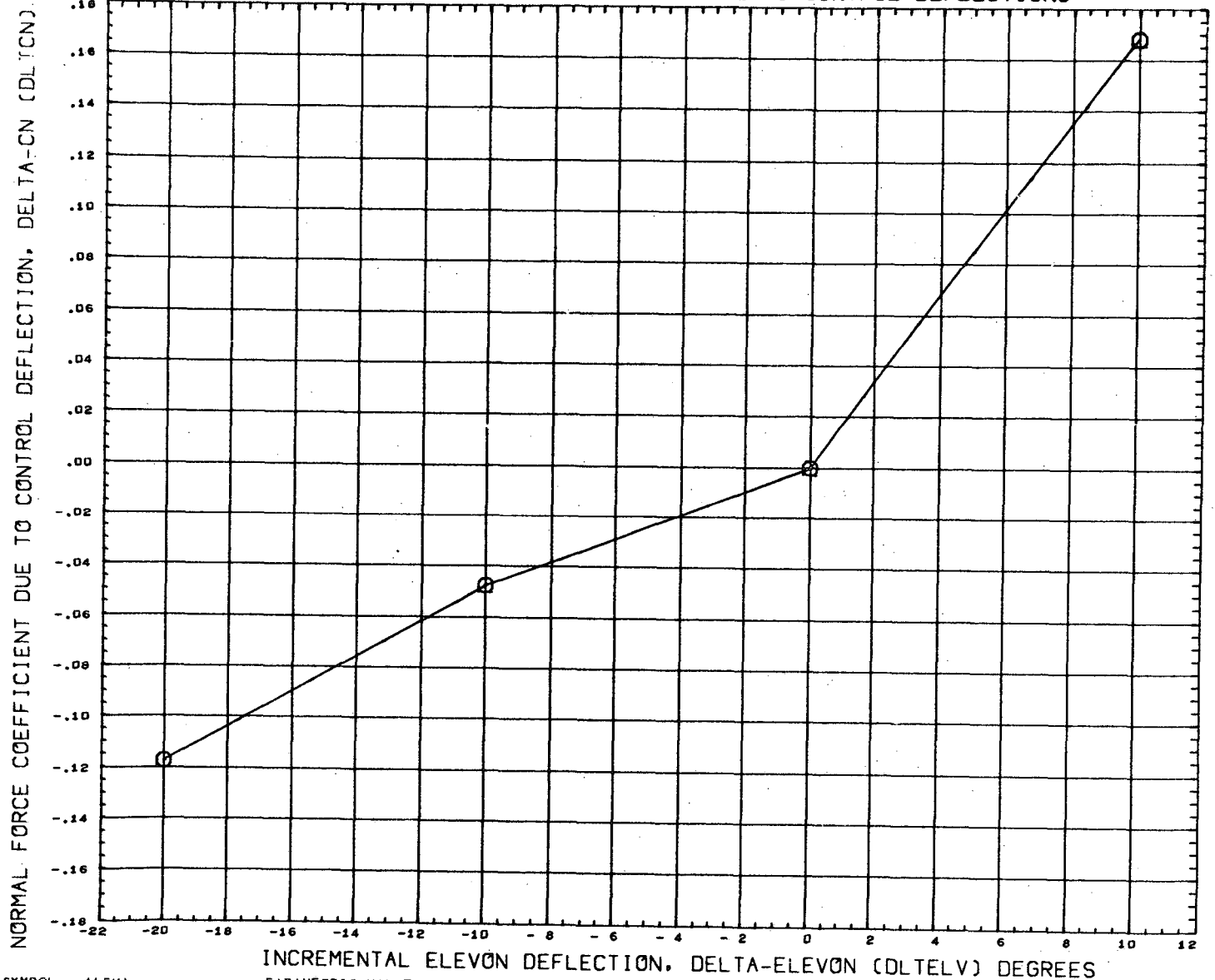
LATERAL-DIRECTIONAL DATA SMALL AND LARGE BODY FLAPS FOR B-9U CONFIG. (ALPHA= 30)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	B-FLAP	ELEVON	CANARD	REFERENCE INFORMATION	
(B350CA)	MSFC TWT-493 GD/C B25W19C8 ALPHA=30 C=D R=0	30.000		0.000	0.000	SREF	14.9040 SQ. IN.
(A35FCA)	MSFC TWT-493 GD/C B25W19C8F7 ALPHA=30 C=D F=40	30.000	40.000	0.000	0.000	LREF	3.0120 IN.
(A35FCD)	MSFC TWT-493 GD/C B25W19C8F8 ALPHA=30 C=D F=40	30.000	40.000	0.000	0.000	BREF	6.0180 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 4.959

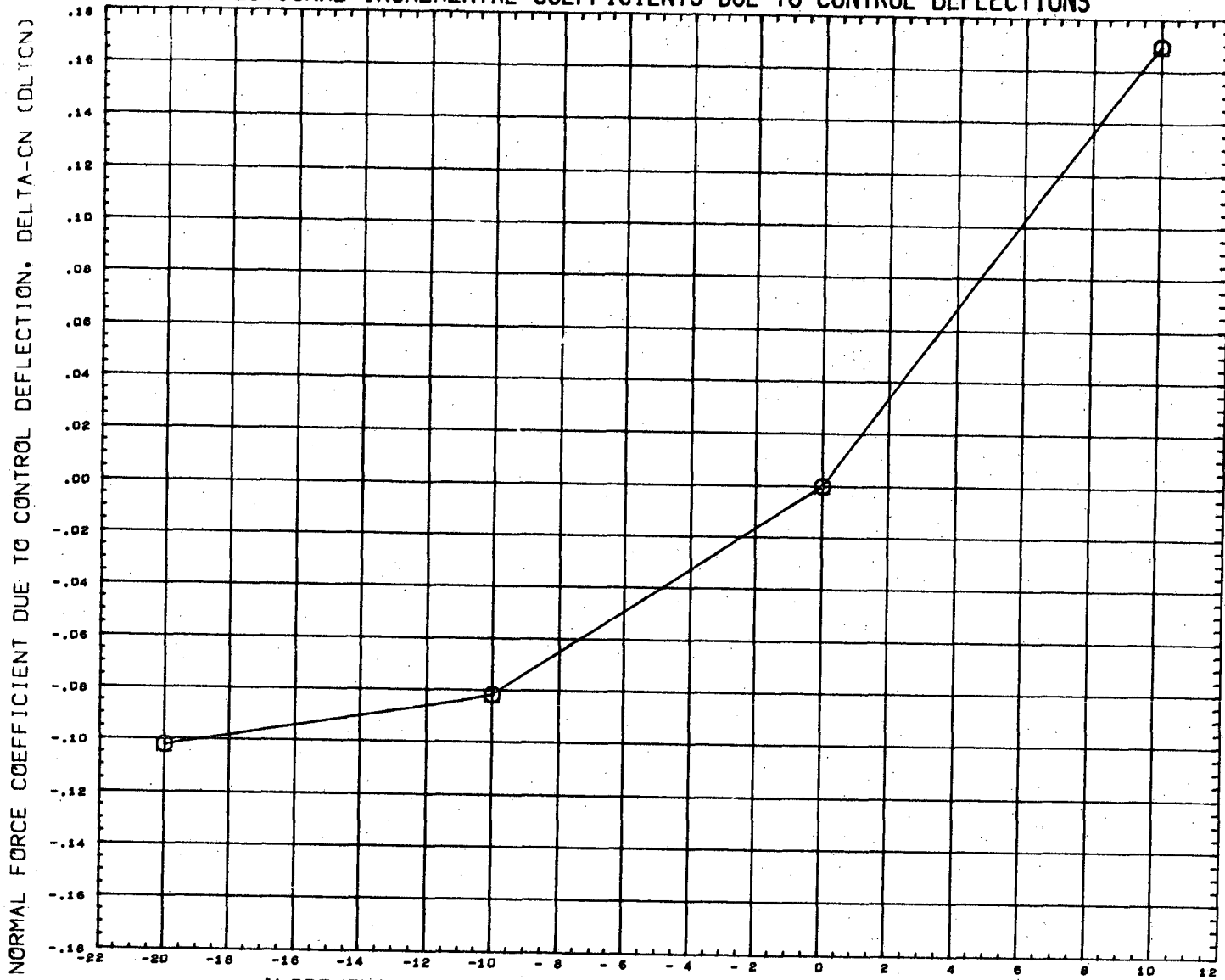
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



PARAMETRIC VALUES											
DATA SOURCE											
REFERENCE INFORMATION											
SYMBOL	ALPHA	MACH	0.900	BETA	0.000	DATASET	DLTEL	DATASET	DLTEL	SREF	14.9040
Q	5.000	CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120
						S35EAO	0.000	S35EAA	10.000	BREF	6.0180
										XMRF	7.2990
										YMRF	0.0000
										ZMRF	0.0000
										SCALE	0.0035

DATA HIST. CODE 1#C

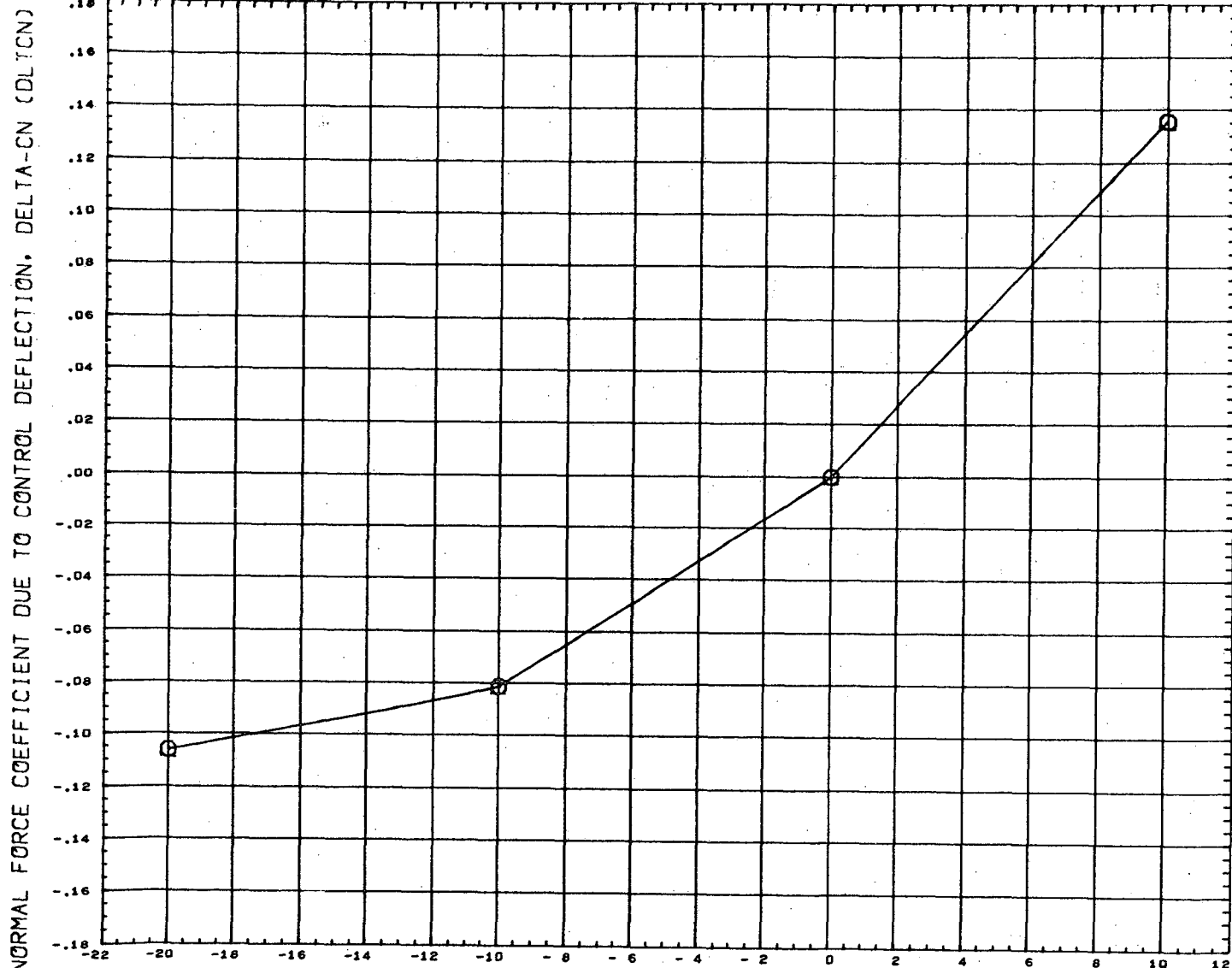
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O	ALPHA	10.000	MACH	0.900	BETA	0.000	0.000
	CANARD	0.000	RUDDER	0.000	0.000	0.000	0.000
		DATA SET	DLTEL V	DATA SET	DLTEL V	SREF	14.9040
		S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120
		S35EAO	0.000	S35EAA	10.000	BREF	6.0180
						XMRP	7.2990
						YMRP	0.0000
						ZMRP	0.0000
						SCALE	0.0035

DATA HIST. CODE I* C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

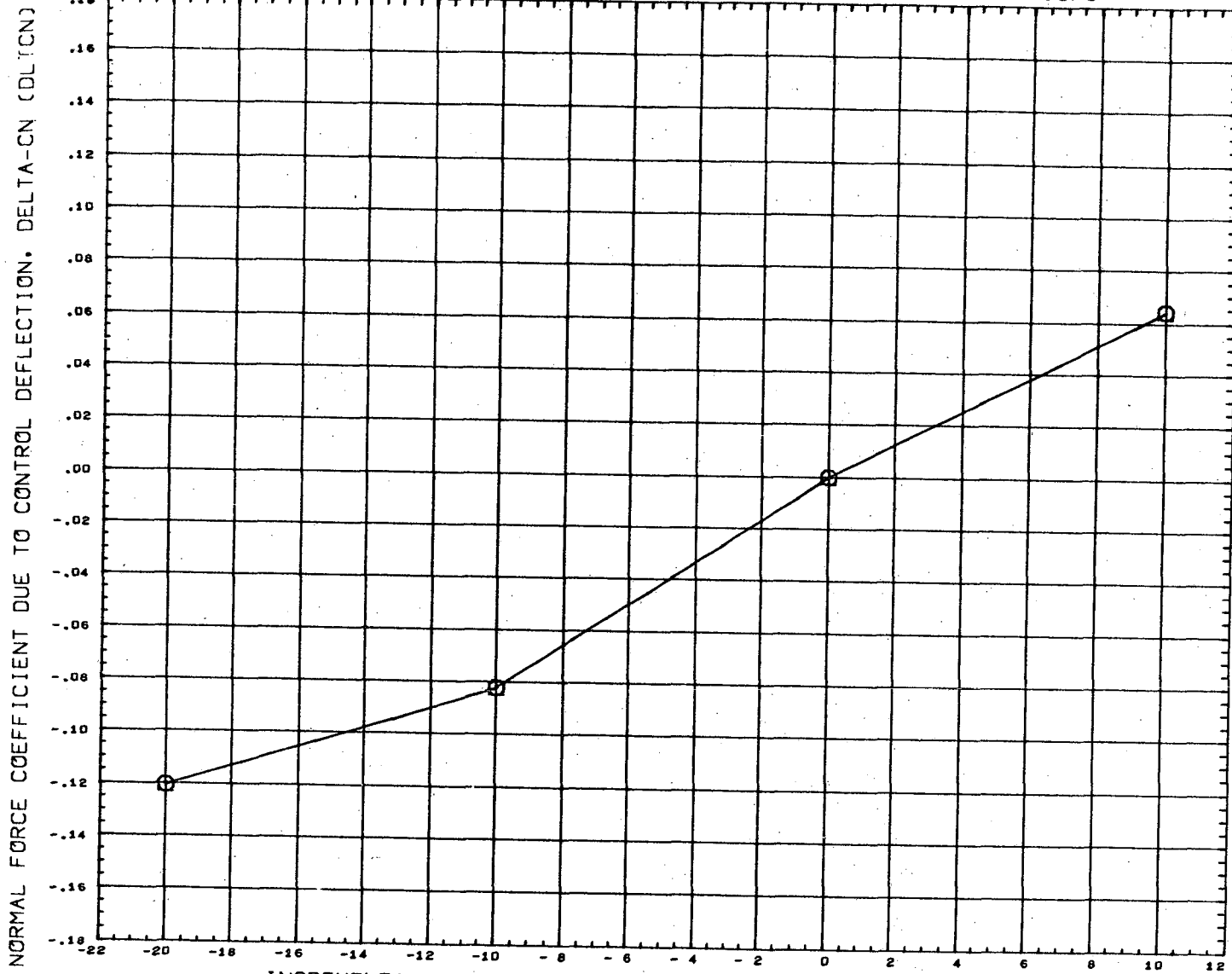


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	15.000		0.900 BETA 0.000	0.000	14.9040 SQ. IN.
		CANARD	0.000 RUDDER 0.000	0.000	3.0120 IN.
				0.000	6.0180 IN.
				0.000	7.2990 IN.
				0.000	0.0000 IN.
				0.000	0.0000 IN.
				0.000	0.0035

DATA HIST. CODE I+C

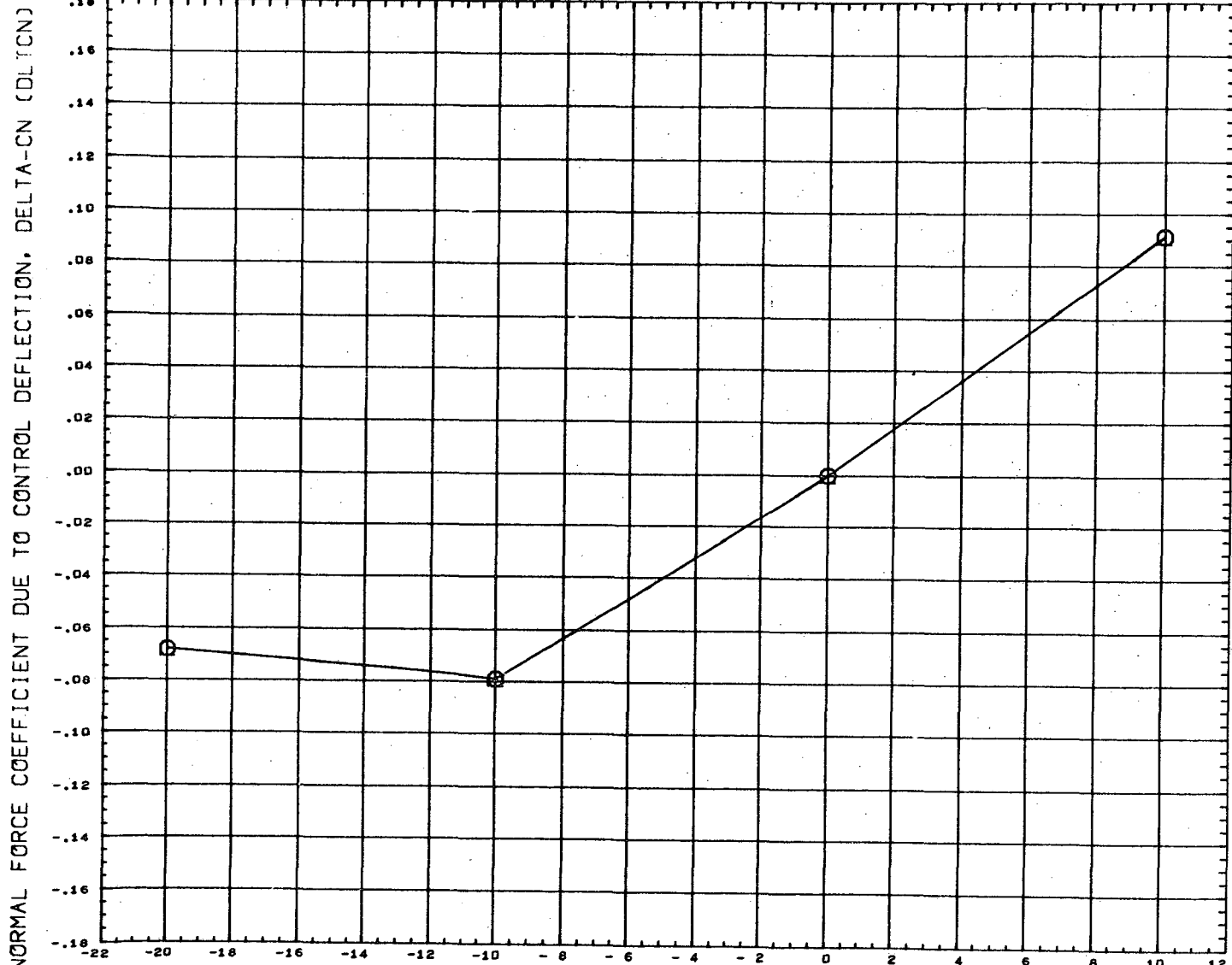
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
Q	20.000	MACH	0.900	BETA	0.000	DATASET	DLTEL	DATASET	DLTEL	SREF	14.9040	sq. in.
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120	in.
						S35EAO	0.000	S35EAA	10.000	BREF	6.0180	in.
										XMRP	7.2990	in.
										YMRP	0.0000	in.
										ZMRP	0.0000	in.
										SCALE	0.0035	

DATA HIST. CODE I&C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

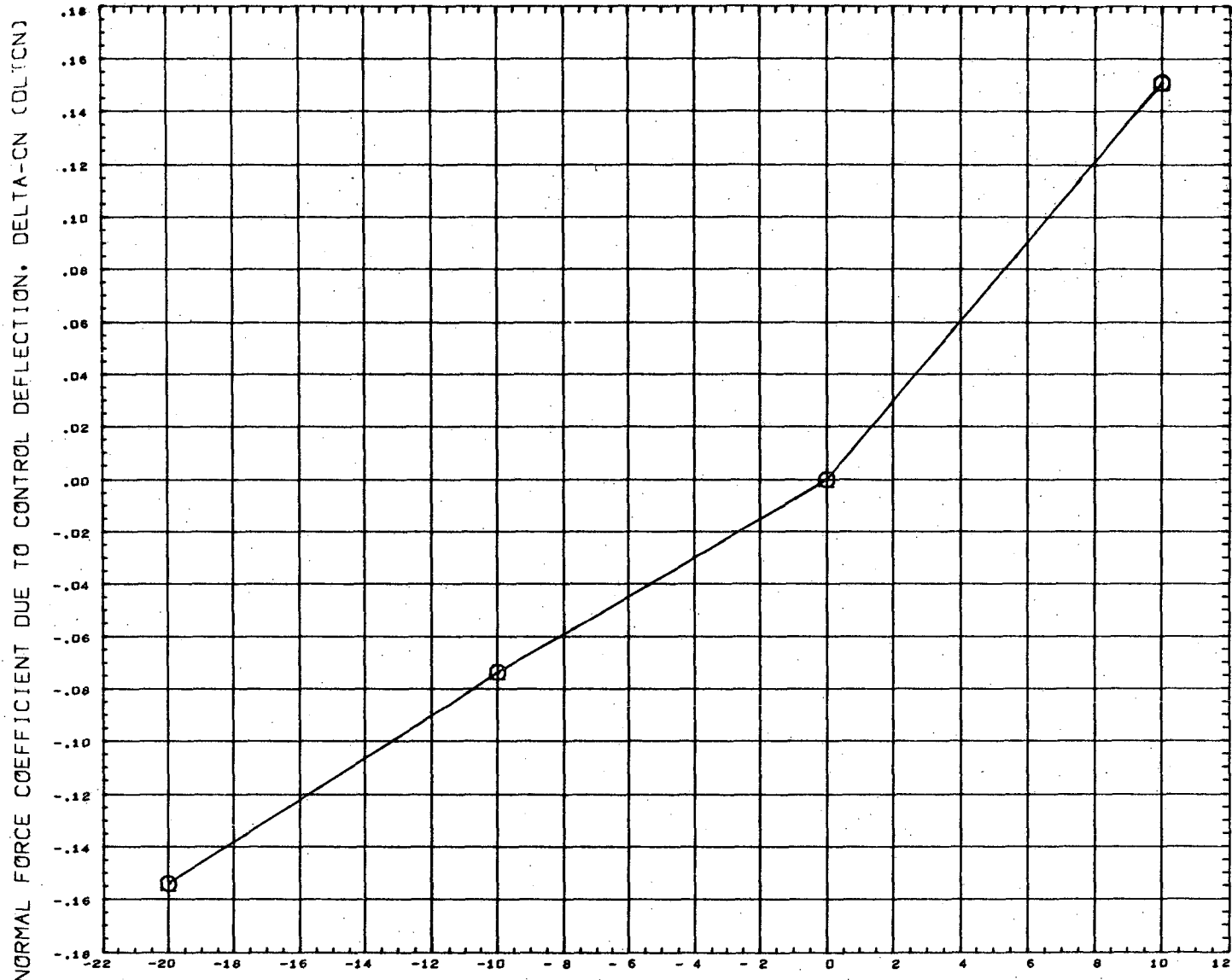


SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	23.000	<u>MACH</u> 0.900 BETA 0.000	DATASET DLTELV DATASET DLTELV	SREF 14.9040 SQ.IN.
		CANARD 0.000 RUDDER 0.000	S35EAB - 20.000 S35EAC - 10.000	LREF 3.0120 IN.
			S35EAO 0.000 S35EAA 10.000	BREF 6.0180 IN.
				XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I&C

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LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

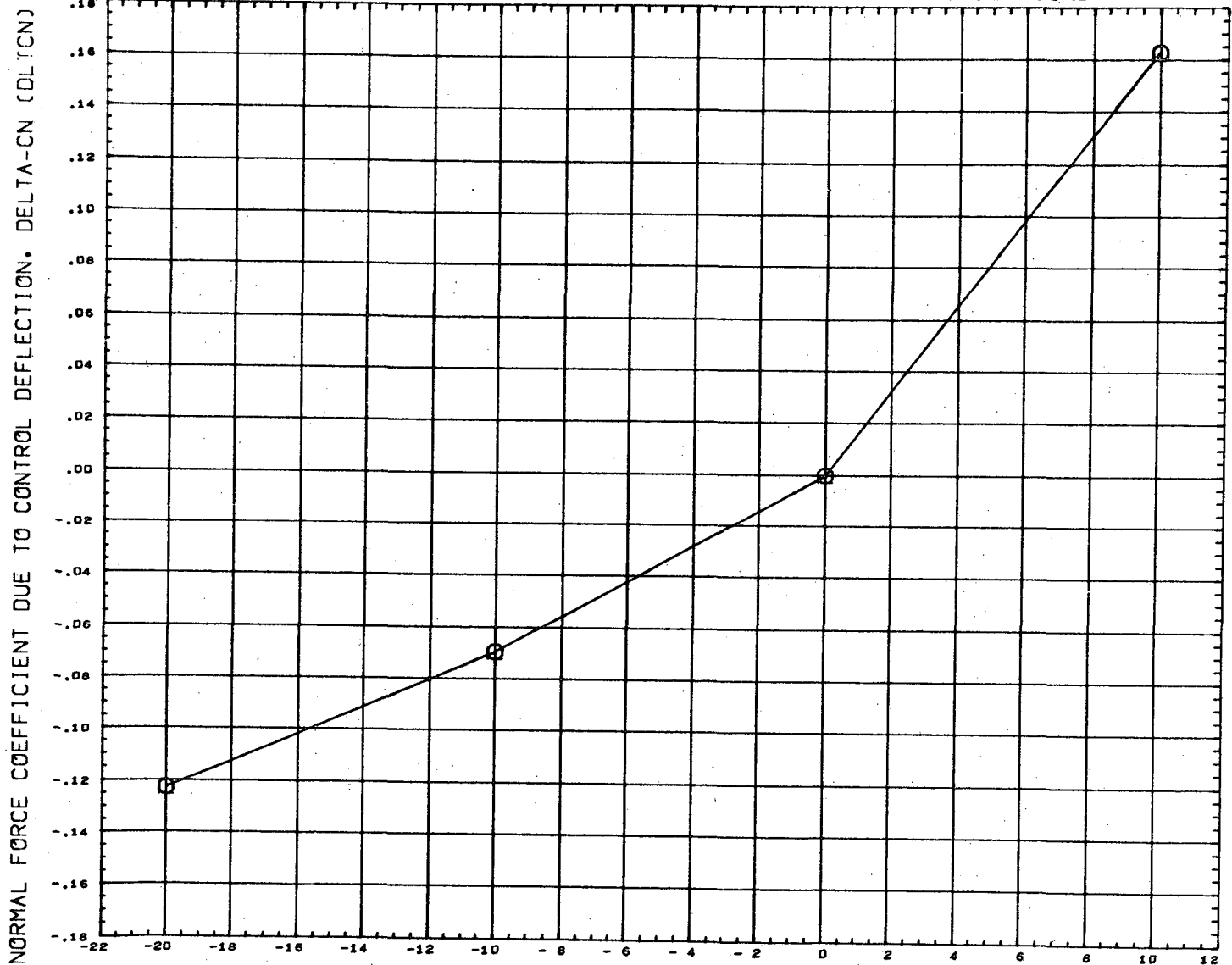


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
○	5.000	<u>MACH</u>	1.000	BETA	0.000	DATASET	DLTELV	DATASET	DLTELV	SREF	14.9040	SG. IN.
		<u>CANARD</u>	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120	IN.
						S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.
										XMRP	7.2990	IN.
										YMRP	0.0000	IN.
										ZMRP	0.0000	IN.
										SCALE	0.0035	

DATA HIST. CODE I*C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

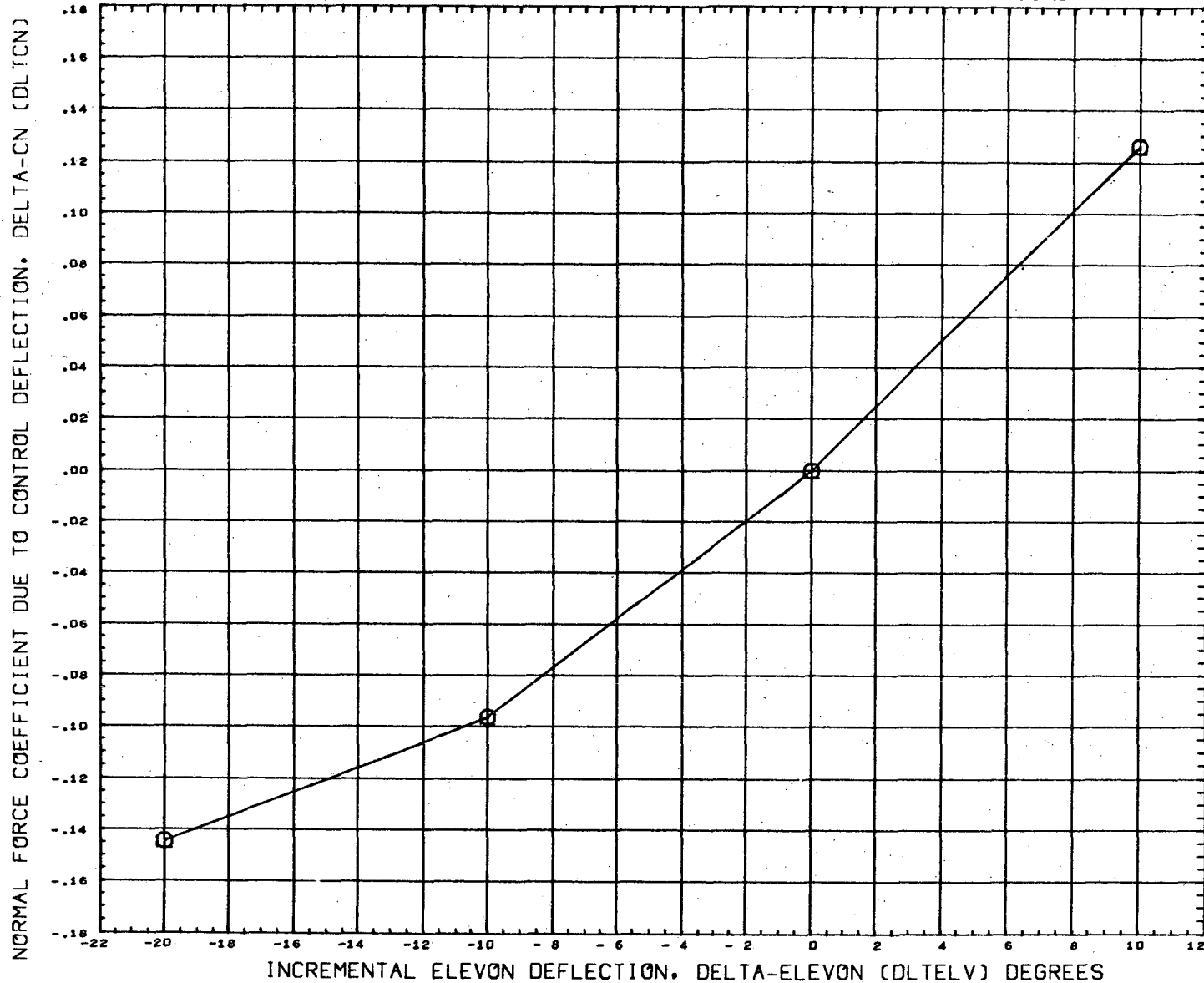


INCREMENTAL ELEVON DEFLECTION, Δ -ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
0	10.000	MACH	1.000	BETA	0.000	DATASET	DLTELV	DATASET	DLTELV	SREF	14.9040	SQ. IN.	
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120	IN.	
						S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.	
										XMRP	7.2990	IN.	
										YMRP	0.0000	IN.	
										ZMRP	0.0000	IN.	
										SCALE	0.0035		
		DATA HIST. CODE	I#C										

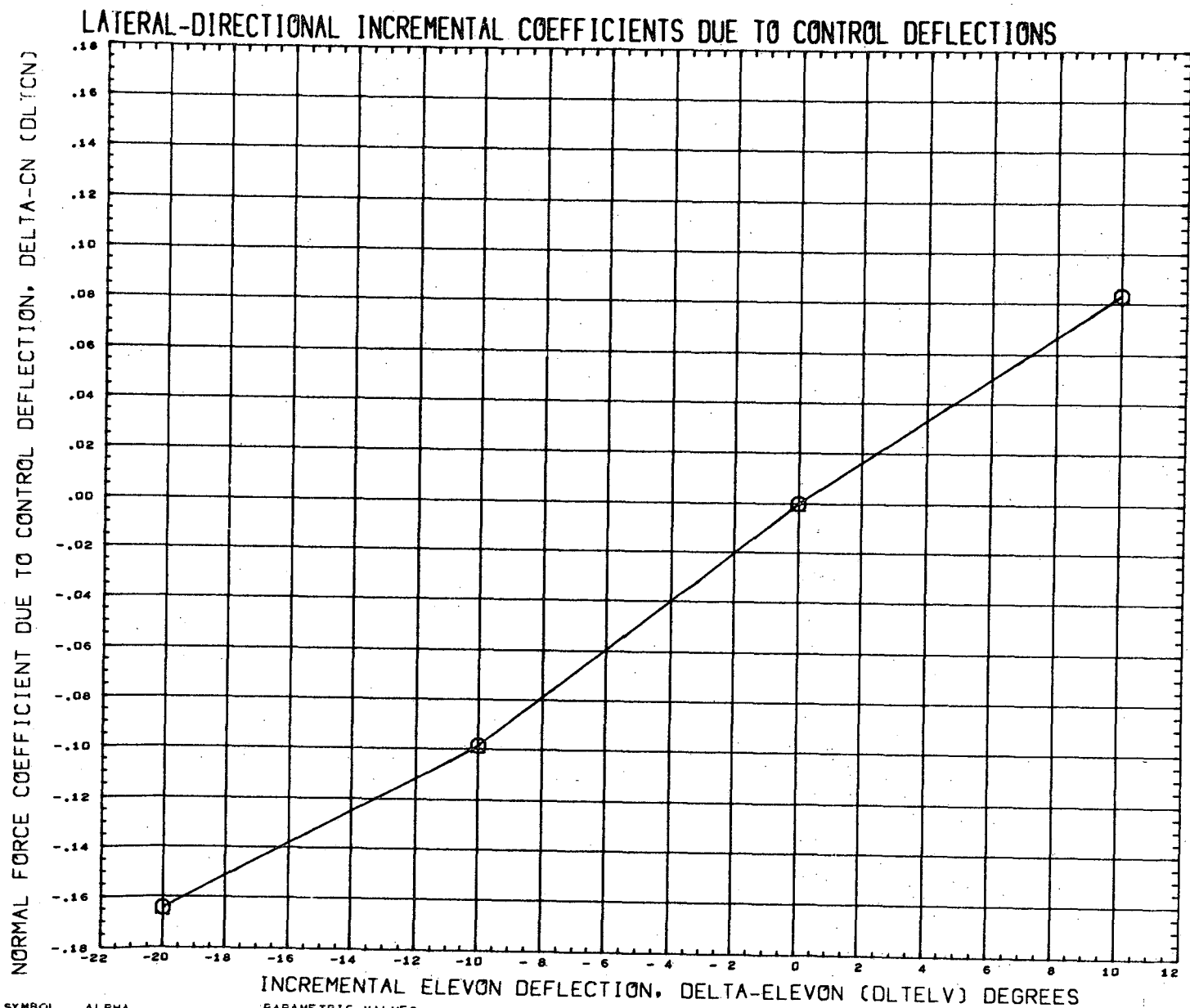
DATA HIST. CODE I* C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
Q	15.000	MACH	1.000	BETA	0.000	DATASET	DLTELV	DATASET	DLTELV	SREF	14.9040	SQ.IN.	
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120	IN.	
						S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.	
										XMRP	7.2990	IN.	
										YMRP	0.0000	IN.	
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										SCALE	0.0035		

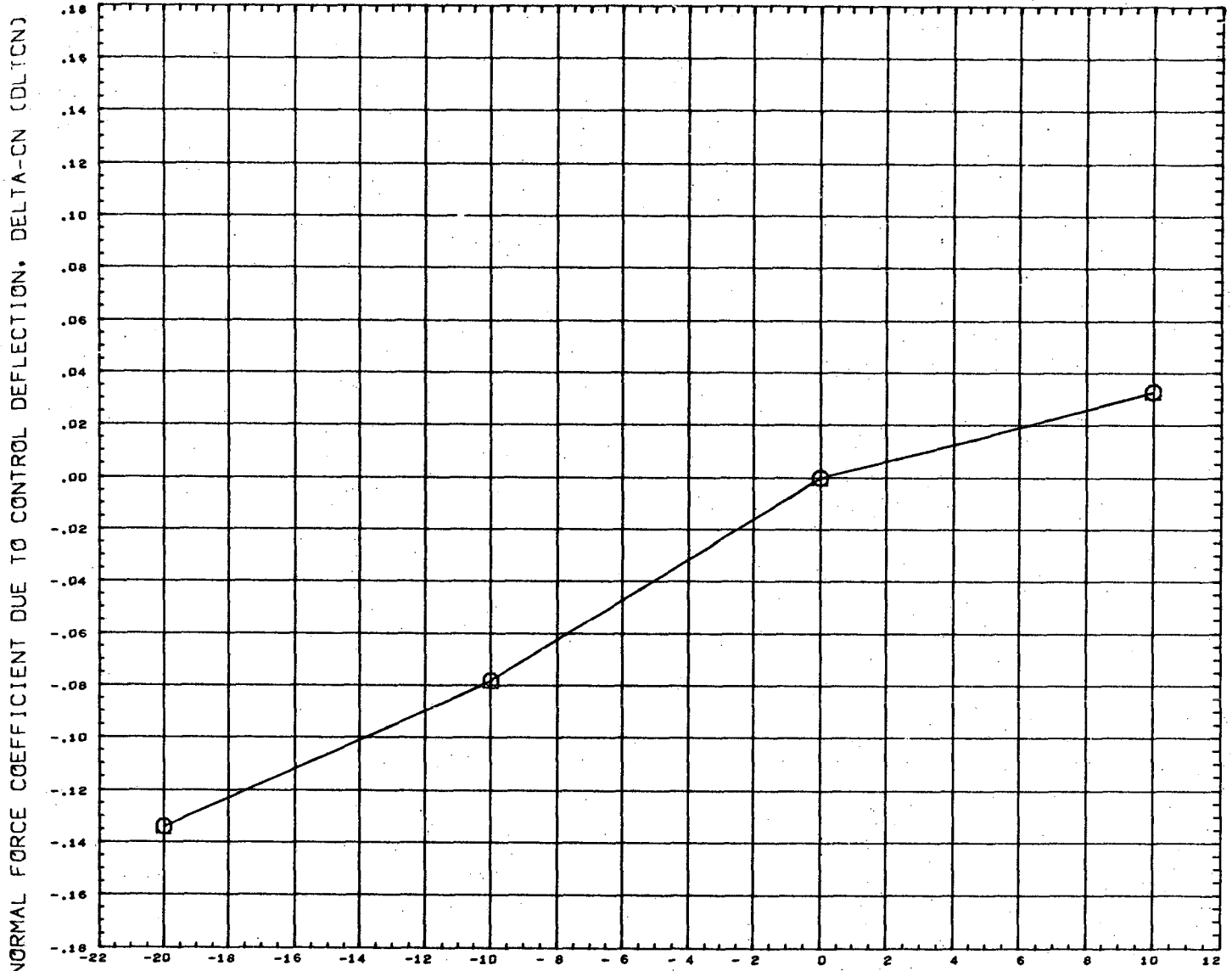
DATA HIST. CODE I*C



SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION				
Q	20.000	MACH	1.000	BETA	0.000	DATASET	DLTEL V	SREF	14.9040	50. IN.
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	LREF	3.0120	IN.
						S35EAO	0.000	BREF	6.0180	IN.
								XMRP	7.2990	IN.
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								SCALE	0.0035	

DATA HIST. CODE 1#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

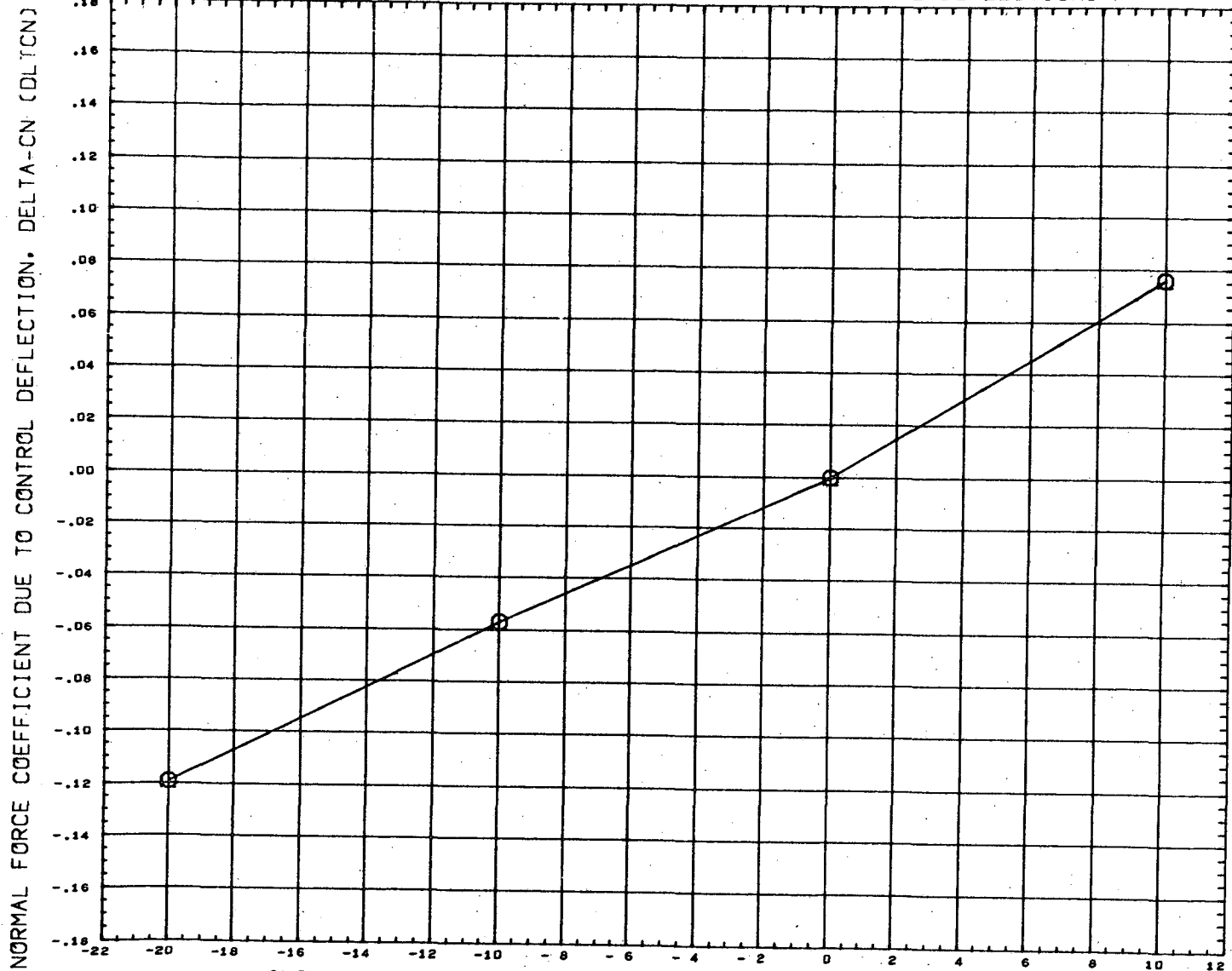


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
□	23.000	1.000 BETA 0.000	DATASET DLTELV	SREF 14.9040 SQ. IN.
		0.000 RUDDER 0.000	DATASET DLTELV	LREF 3.0120 IN.
			S35EAB - 20.000	BREF 6.0180 IN.
			S35EAO 0.000	XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

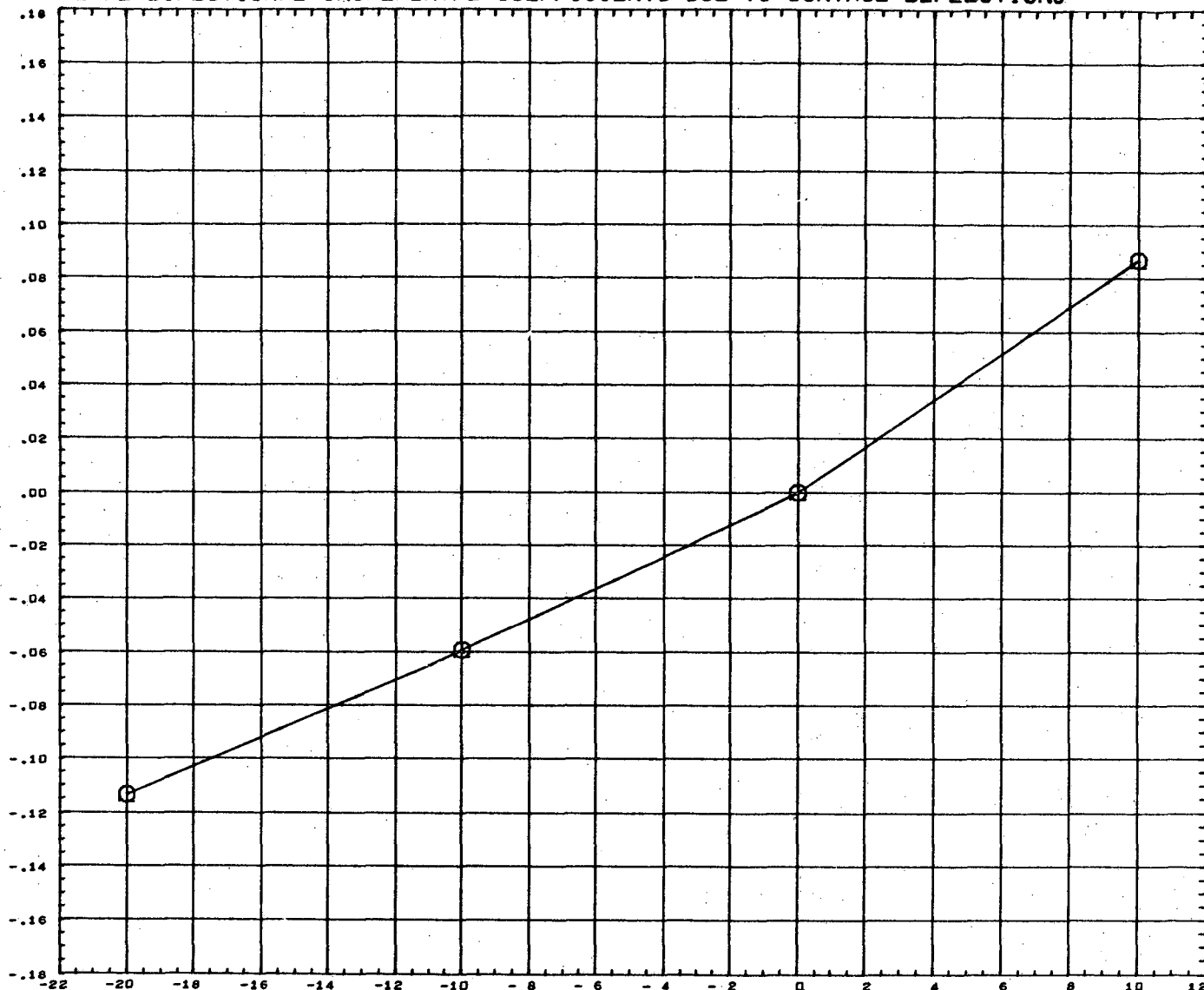


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE				REFERENCE INFORMATION			
Q	5.000	1.200	BETA	0.000	DATASET	DLTELV	DATASET	DLTELV	SREF	14.9040	SQ. IN.
		0.000	RUDDER	0.000	S35EAB	-20.000	S35EAC	-10.000	LREF	3.0120	IN.
					S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.
									XMRP	7.2990	IN.
									YMRP	0.0000	IN.
									ZMRP	0.0000	IN.
									SCALE	0.0035	

DATA HIST. CODE I#C

NORMAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION. DELTA-CN (DLTCN)

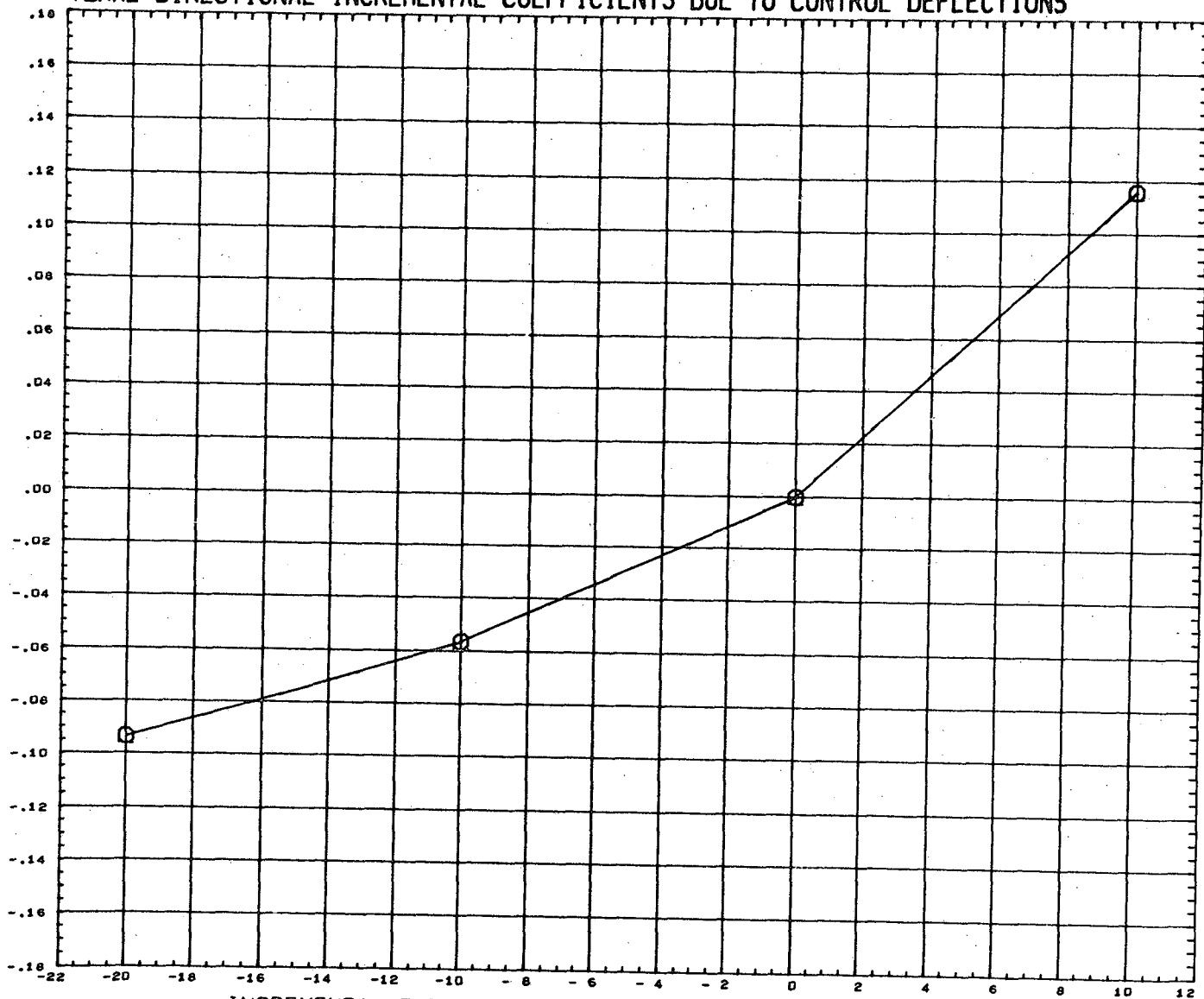


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA		PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION			
□	10.000	<u>MACH</u>	1.200	BETA	0.000	DATASET	DLTELTV	DATASET	DLTELTV	SREF	14.9040	SG.IN.
		CANARD	0.000	RUDDER	0.000	\$35EAB	- 20.000	\$35EAC	- 10.000	LREF	3.0120	IN.
						\$35EAO	0.000	\$35EAA	10.000	BREF	6.0180	IN.
										XMRP	7.2990	IN.
										YMRP	0.0000	IN.
										ZMRP	0.0000	IN.
										SCALE	0.0035	
		DATA HIST CODE	I-10									

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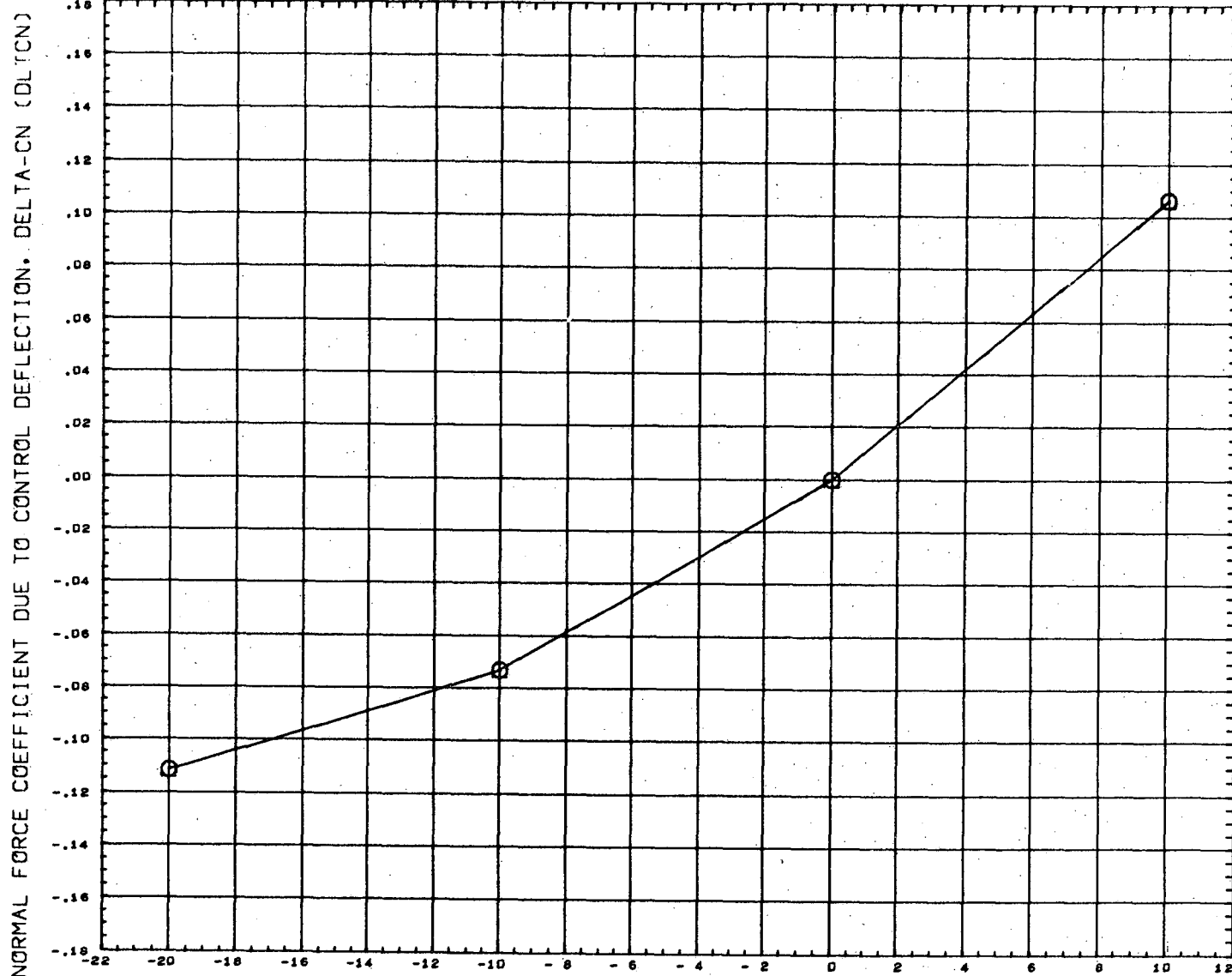
NORMAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CN (DLTCN)



INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

S Y M B O L	A L P H A	P A R A M E T R I C V A L U E S	D A T A S O U R C E	R E F E R E N C E I N F O R M A T I O N
<input type="checkbox"/>	15.000	MACH 1.200 BETA 0.000 DATASET DLTELV DATASET DLTELV		SREF 14.9040 SQ.IN.
	CANARD	0.000 RUDDER 0.000 \$3\$EAB - 20.000 \$3\$EAC - 10.000 \$3\$EAA 10.000		LREF 3.0120 IN. BREF 6.0180 IN. XMRP 7.2990 IN. YMRP 0.0000 IN. ZMRP 0.0000 IN. SCALE 0.0035
		DATA HIST. CODE 1*C		

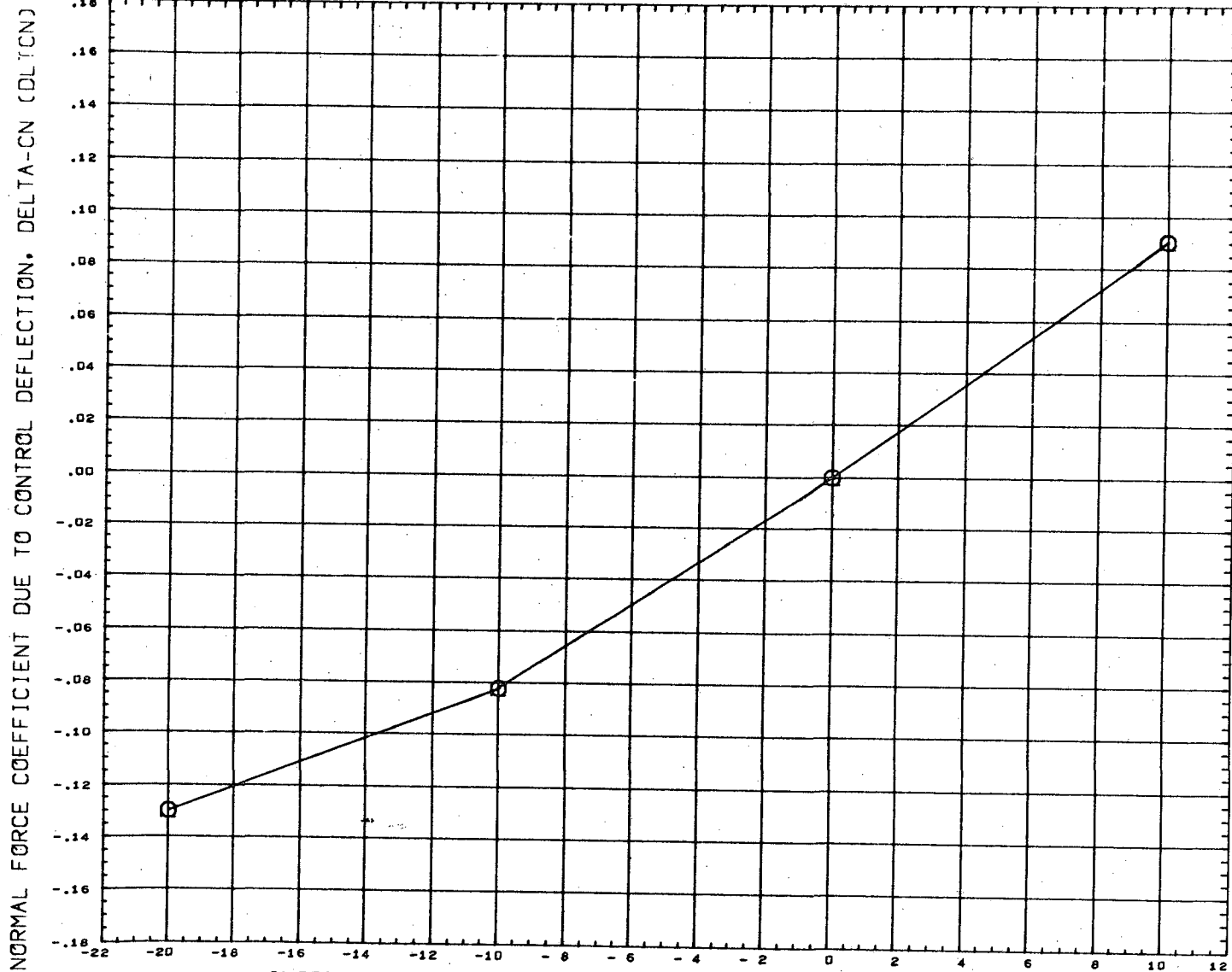
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	20.000	MACH 1.200 BETA 0.000	DATASET DLTEL V DATASET DLTEL V	SREF 14.9040 80.IN.
		CANARD 0.000 RUDDER 0.000	S35EAB - 20.000 S35EAC - 10.000	LREF 3.0120 IN.
			S35EAC 0.000 S35EAA 10.000	BREF 6.0180 IN.
				XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I#C

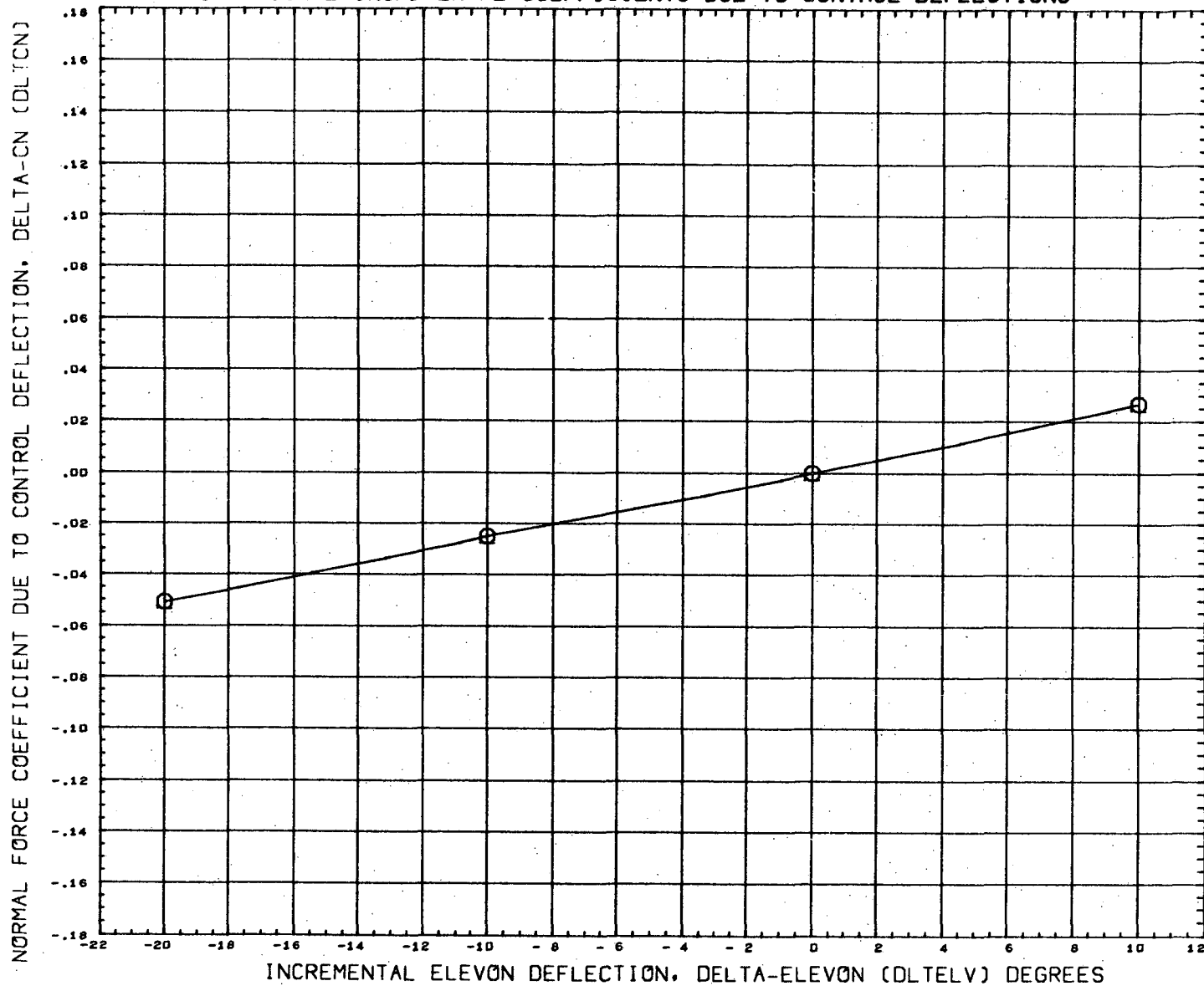
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE				REFERENCE INFORMATION			
○	23.000	1.200	BETA	0.000	DATASET	DLTEL V	DATASET	DLTEL V	SREF	14.9040	SQ. IN.
		<u>MACH</u>							LREF	3.0120	IN.
		CANARD	0.000	RUDDER	0.000	S35EAB - 20.000	S35EAC - 10.000	S35EAA 10.000	BREF	6.0180	IN.
									XMRP	7.2990	IN.
									YMRP	0.0000	IN.
									ZMRP	0.0000	IN.
									SCALE	0.0035	

DATA HIST. CODE I#C

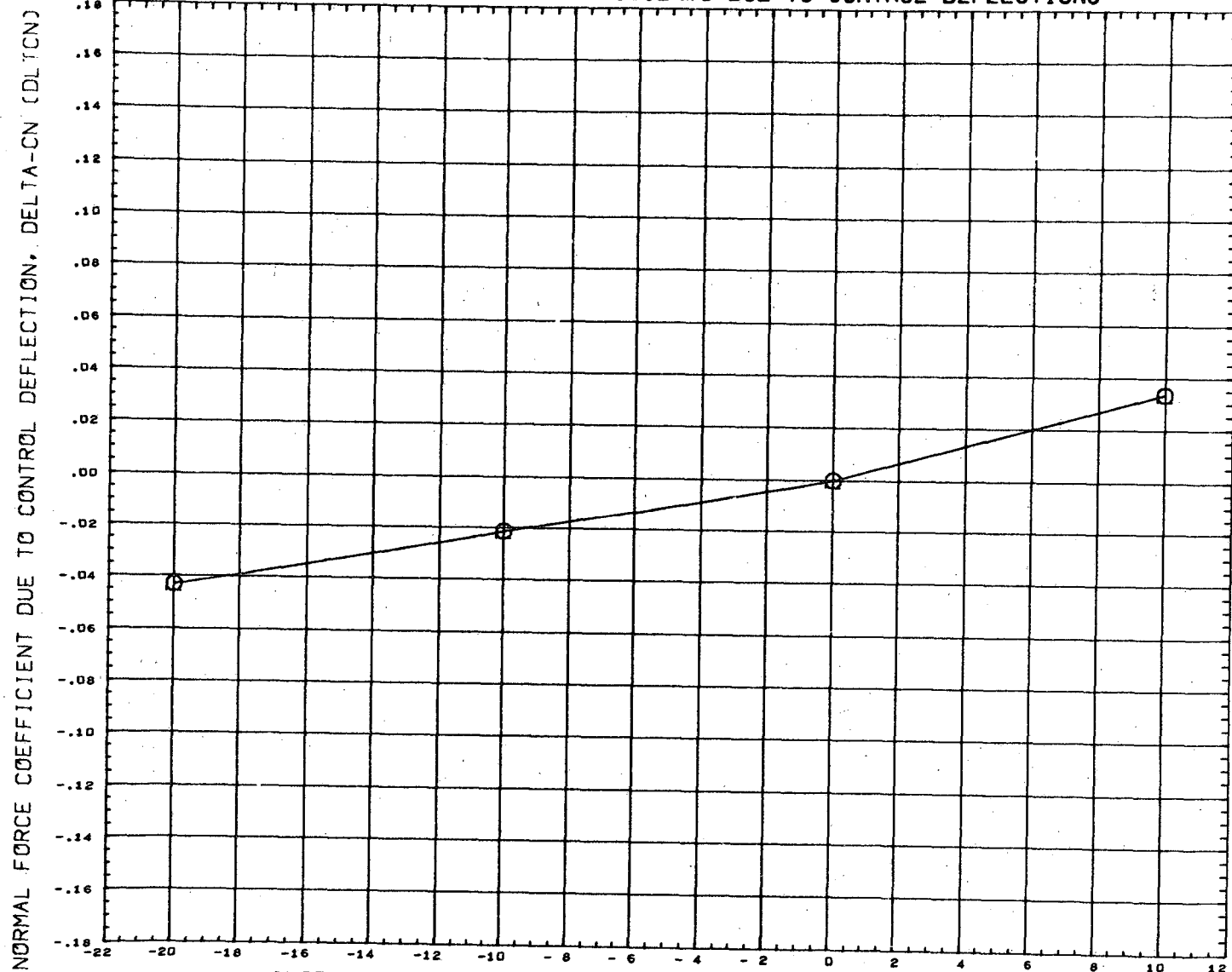
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
○	5.000	<u>MACH</u>	2.000	BETA	0.000	DATASET	DLTELV	DATASET	DLTELV	SREF	14.9040	SQ.IN.
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LRZF	3.0120	IN.
						S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.
										XMRP	7.2990	IN.
										YMRP	0.0000	IN.
										ZMRP	0.0000	IN.
										SCALE	0.0035	

DATA HIST. CODE I=C

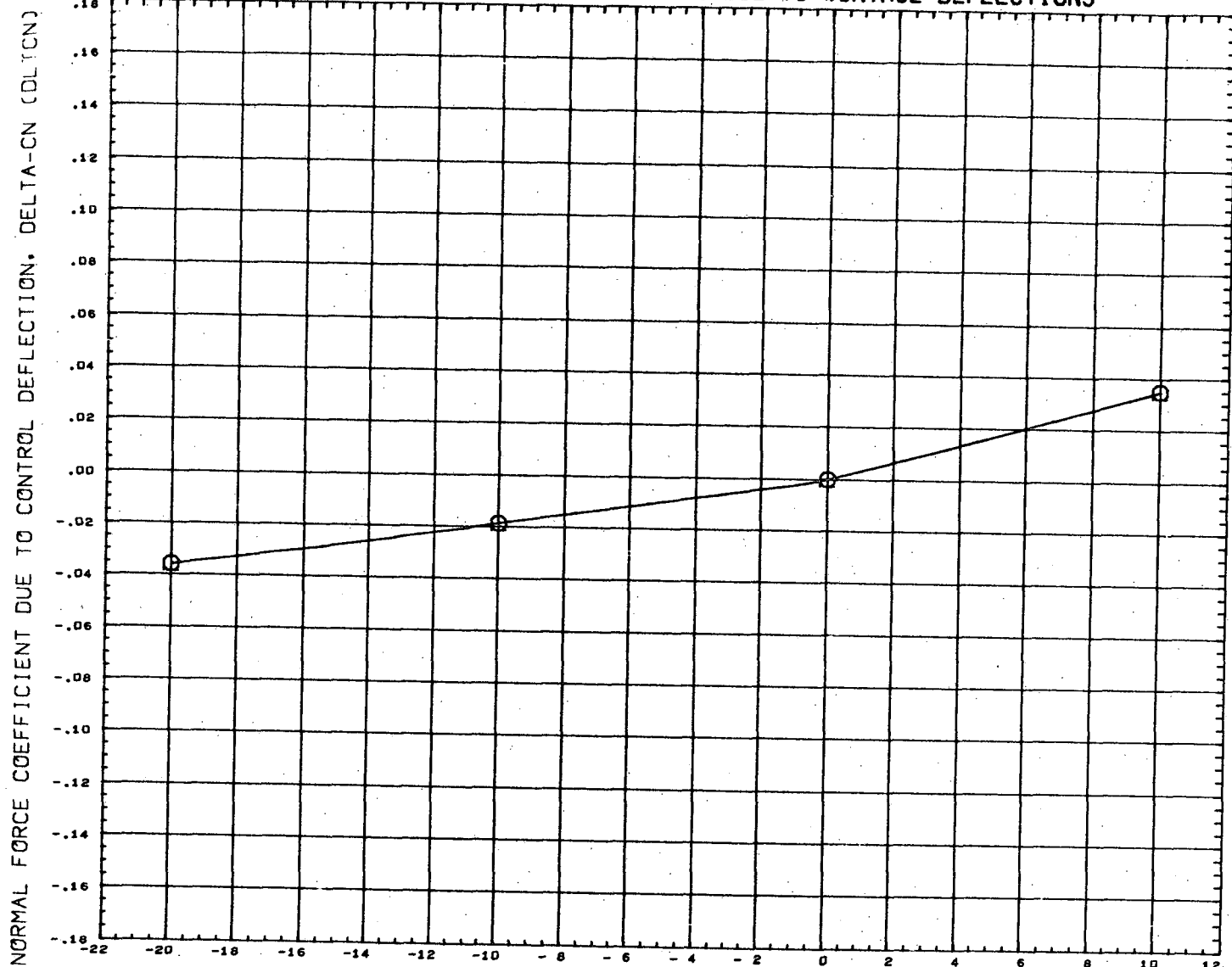
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



SYMBOL \bigcirc ALPHA 10.000 MACH 2.000 BETA 0.000 DATASET DLTELV DATASET DLTELV REFERENCE INFORMATION
 CANARD 0.000 RUDDER 0.000 S35EAB -20.000 S35EAC -10.000 SREF 14.9040 SQ. IN.
 S35EAO 0.000 S35EAA 10.000 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035 IN.

DATA HIST. CODE 1*0

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

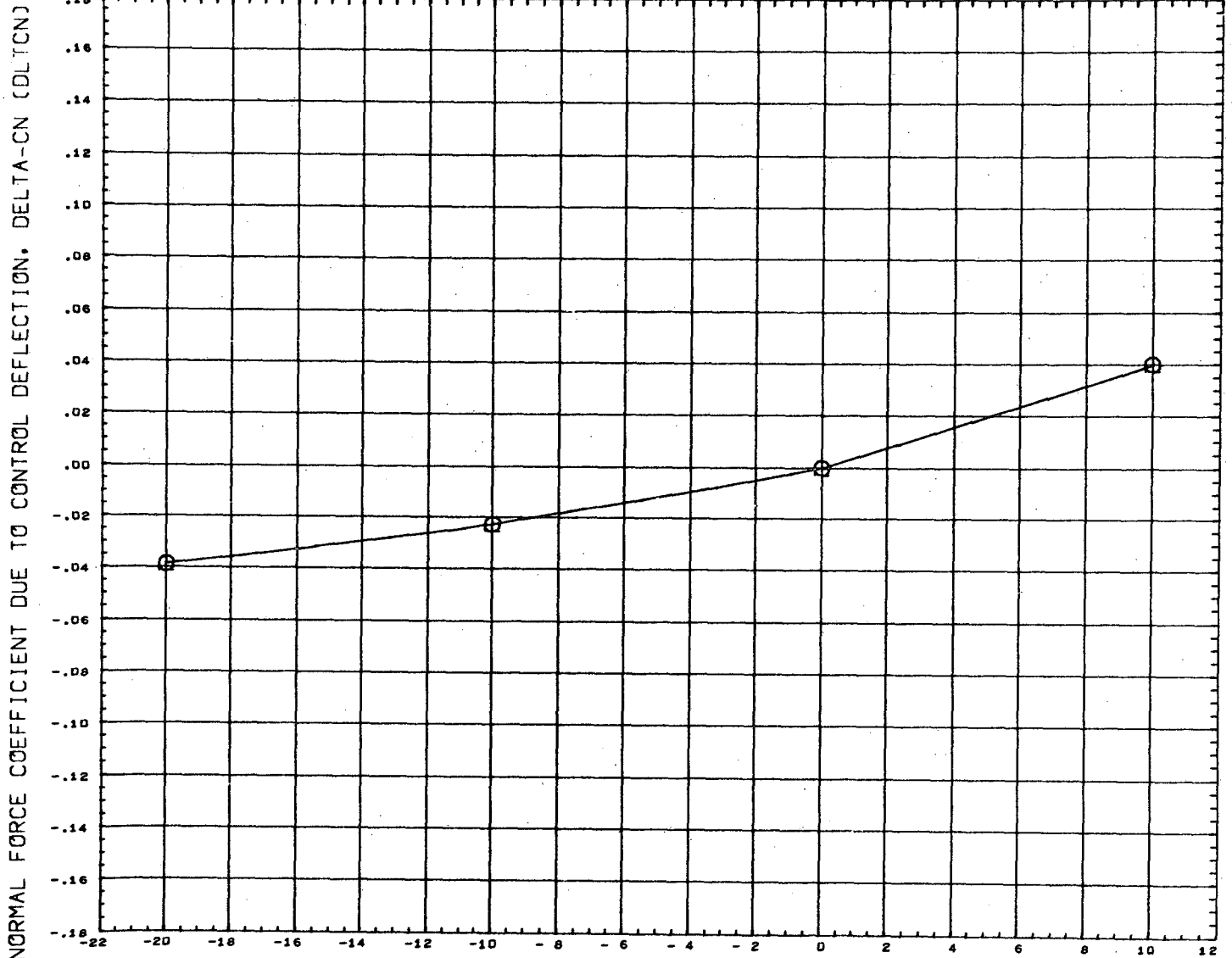


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
		MACH	BETA	BETA	0.000	DATASET	DLTELV	DATASET	DLTELV	SREF	IN.	IN.
Q	15.000	CANARD	0.000	RUDDER	0.000	S35EAB	-20.000	S35EAC	-10.000	14.9040	59. IN.	
						S35EAO	0.000	S35EAA	10.000	3.0120	IN.	
										6.0180	IN.	
										7.2990	IN.	
										0.0000	IN.	
										0.0000	IN.	
										SCALE	0.0035	

DATA HIST. CODE I#C

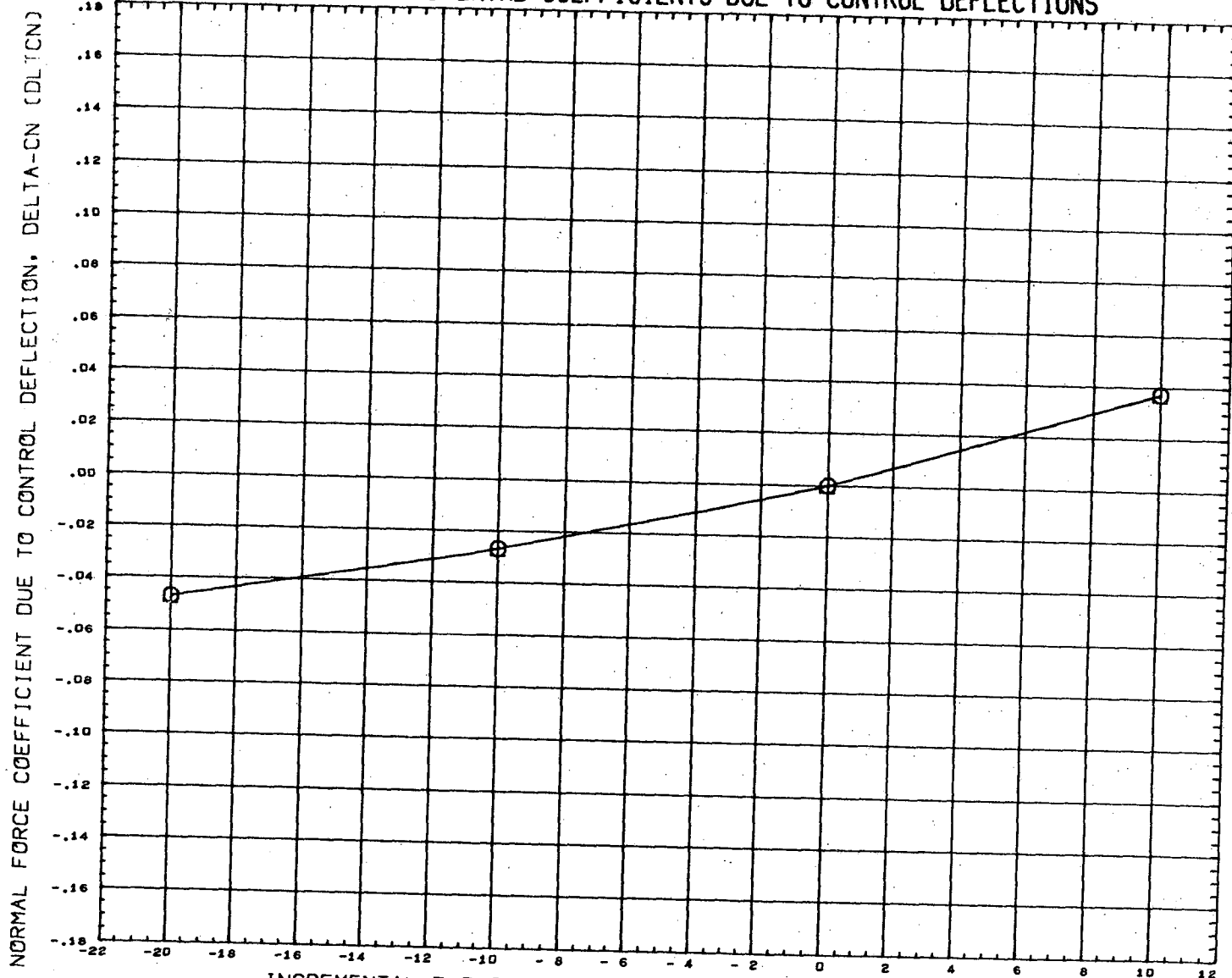
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
D	ALPHA	20.000	BETA	0.000	DLTELV	SREF	14.9040
	CANARD	0.000	RUDDER	0.000	DLTELV	LREF	3.0120
						BREF	6.0180
						XMRP	7.2990
						YMRP	0.0000
						ZMRP	0.0000
						SCALE	0.0035

DATA HIST. CODE I* C

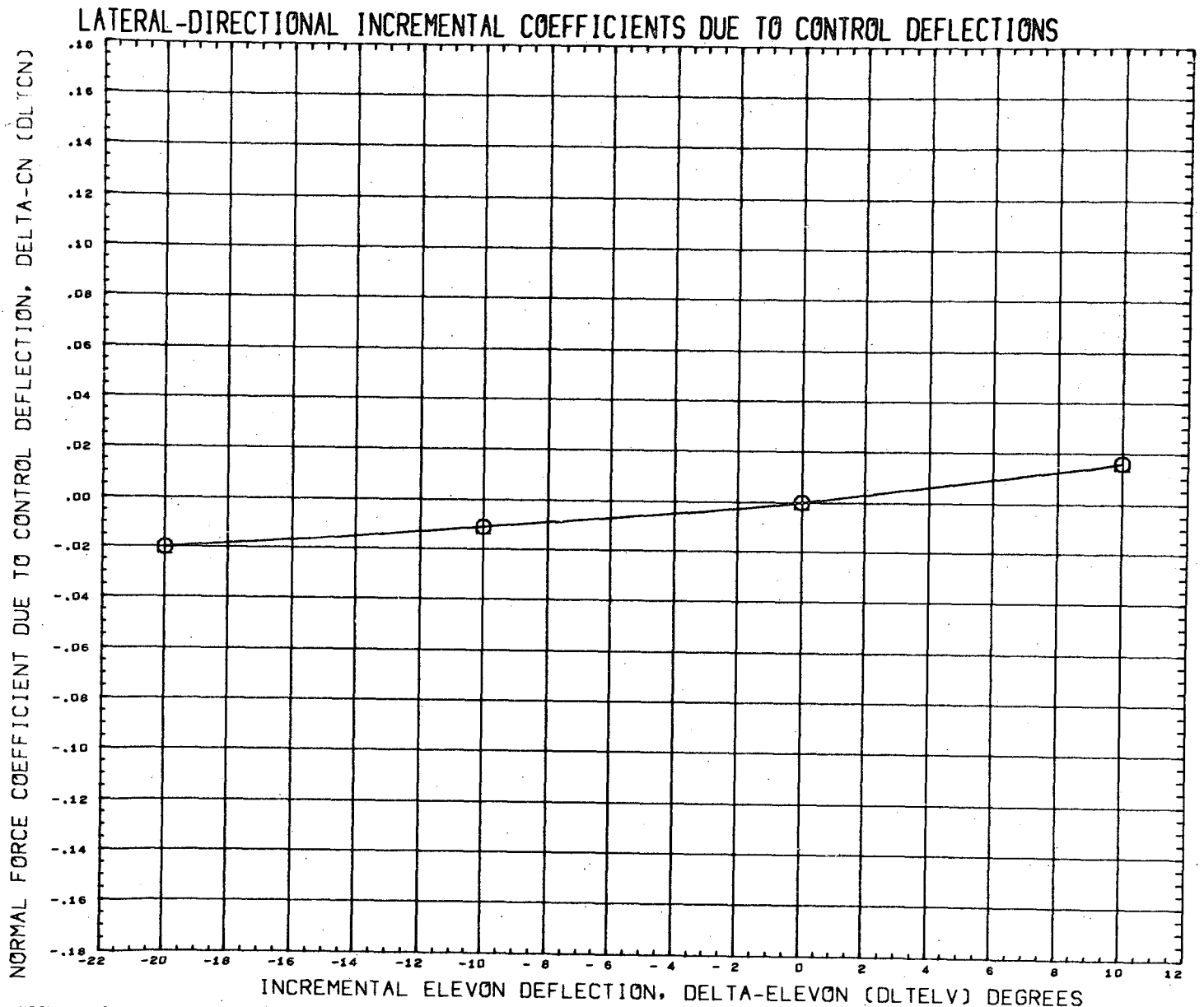
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	BETA	DATA SOURCE	DLTELV	REFERENCE INFORMATION	SQ. IN.
Q	23.000	CANARD	2.000	0.000	DATA SET	DLTELV	SREF	14.9040
			0.000	0.000	S35EAB	-20.000	LREF	3.0120
					S35EAO	0.000	BREF	6.0180
							XMRF	7.2990
							YMRF	0.0000
							ZMRF	0.0000
							SCALE	0.0035

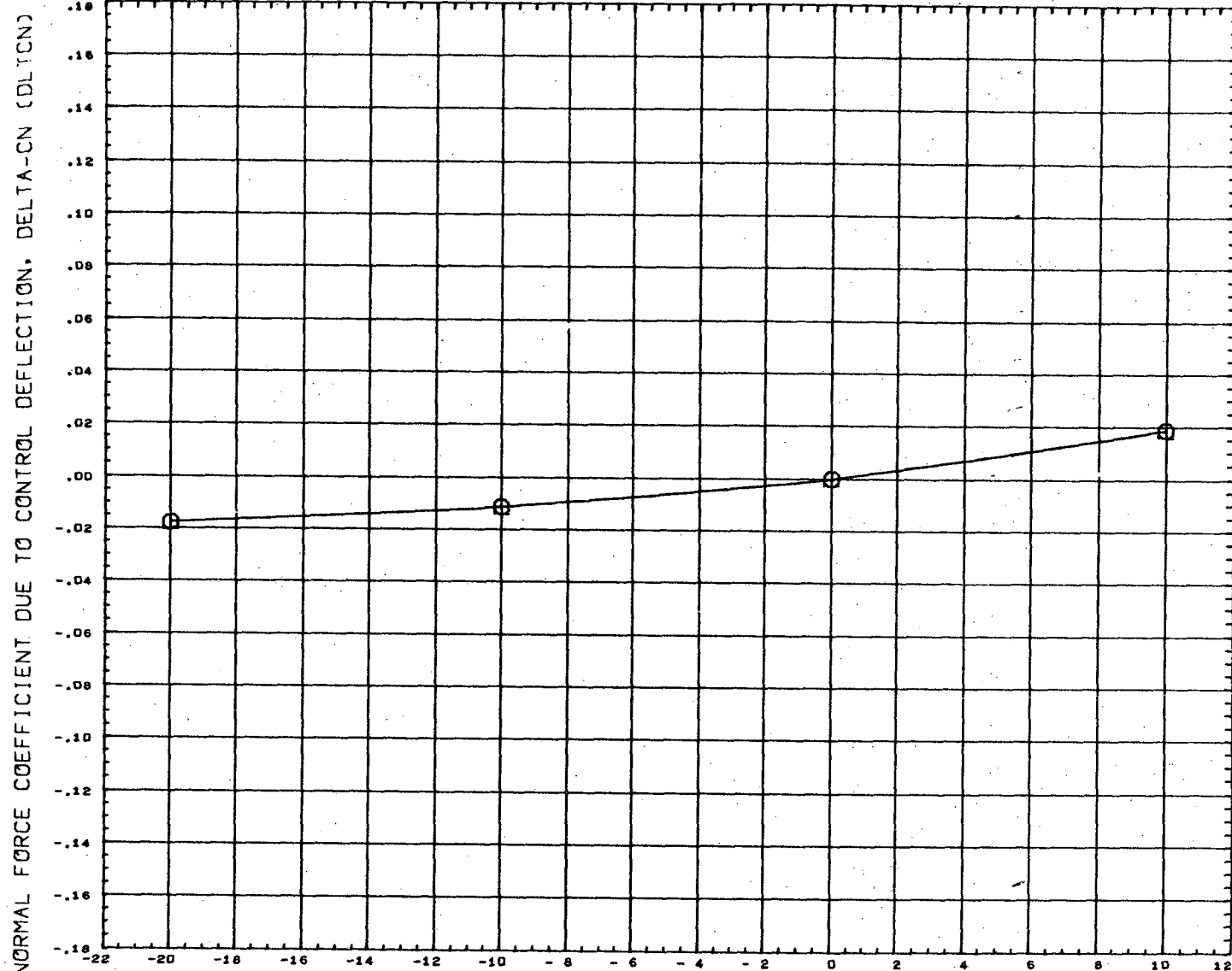
DATA HIST. CODE I#C



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
Q	5.000	MACH	3.000	BETA	0.000	DATASET	DLTEL V	DATASET	DLTEL V	SREF	14.9040	50. IN.
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120	IN.
						S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.
										XMRF	7.2990	IN.
										YMRF	0.0000	IN.
										ZMRF	0.0000	IN.
										SCALE	0.0035	

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

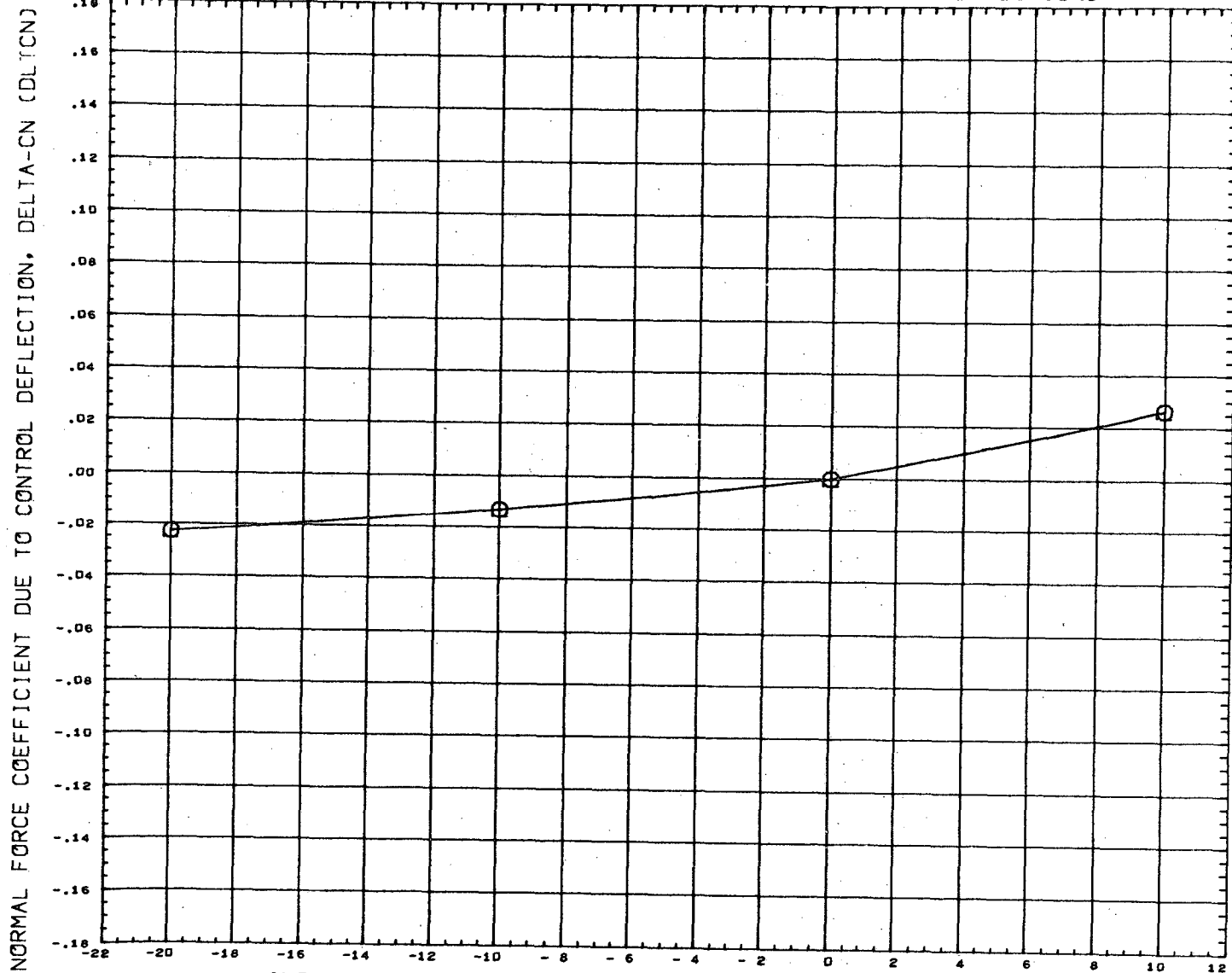


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
Q	10.000	<u>MACH</u>	3.000	BETA	0.000	DATASET	DLTELV	DATASET	DLTELV	SREF	14.9040	SQ. IN.
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120	IN.
						S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.
										XMRP	7.2990	IN.
										YMRP	0.0000	IN.
										ZMRP	0.0000	IN.
										SCALE	0.0035	
		DATA HIST. CODE	I+C									

DATA HIST. CODE I&C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

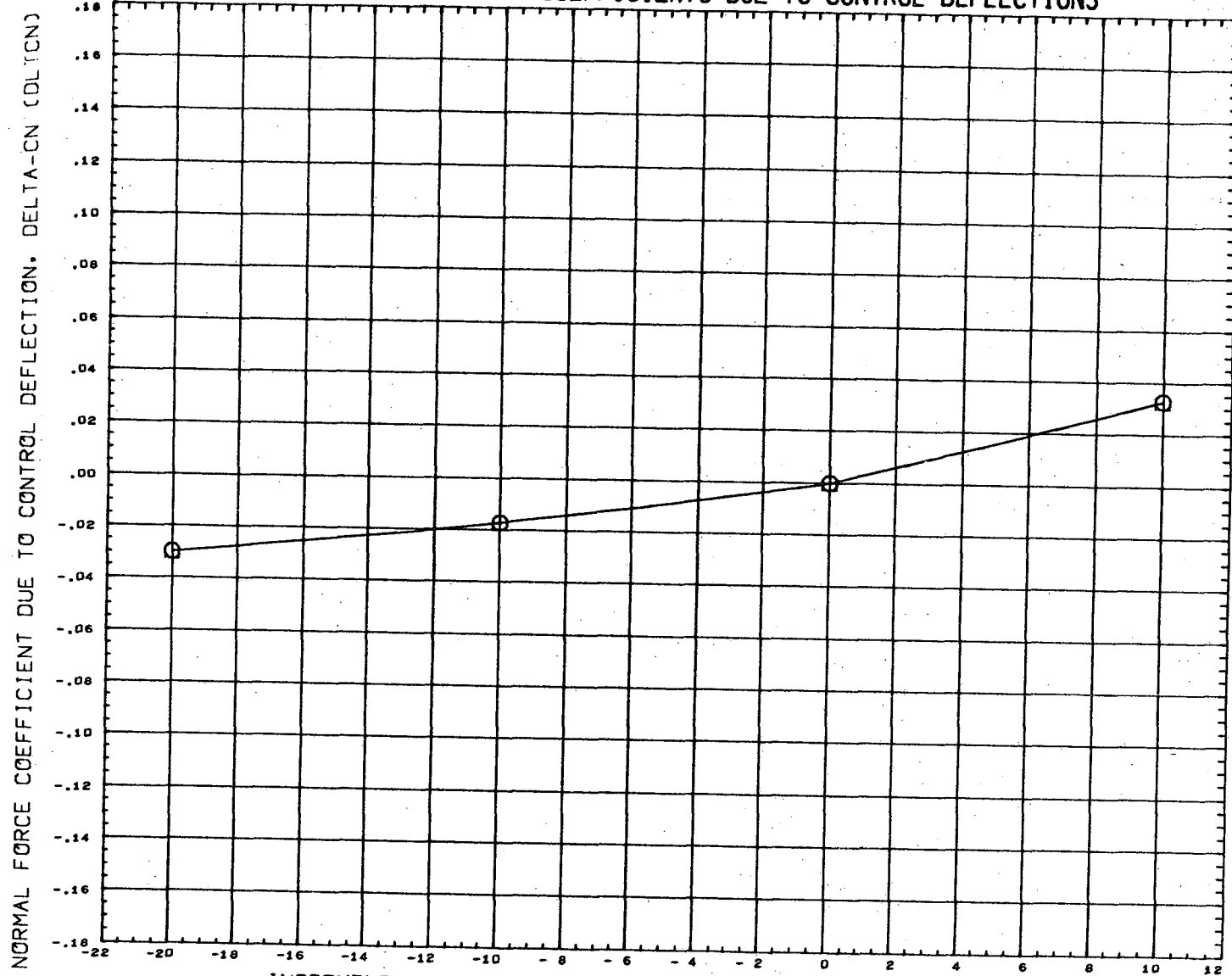


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	15.000	MACH 3.000 BETA 0.000	DATASET DLTELV DATASET DLTELV	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	S35EAB - 20.000 S35EAC - 10.000	LREF 3.0120 IN.
			S35EAO 0.000 S35EAA 10.000	BREF 6.0180 IN.
				XMRF 7.2990 IN.
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				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I#C

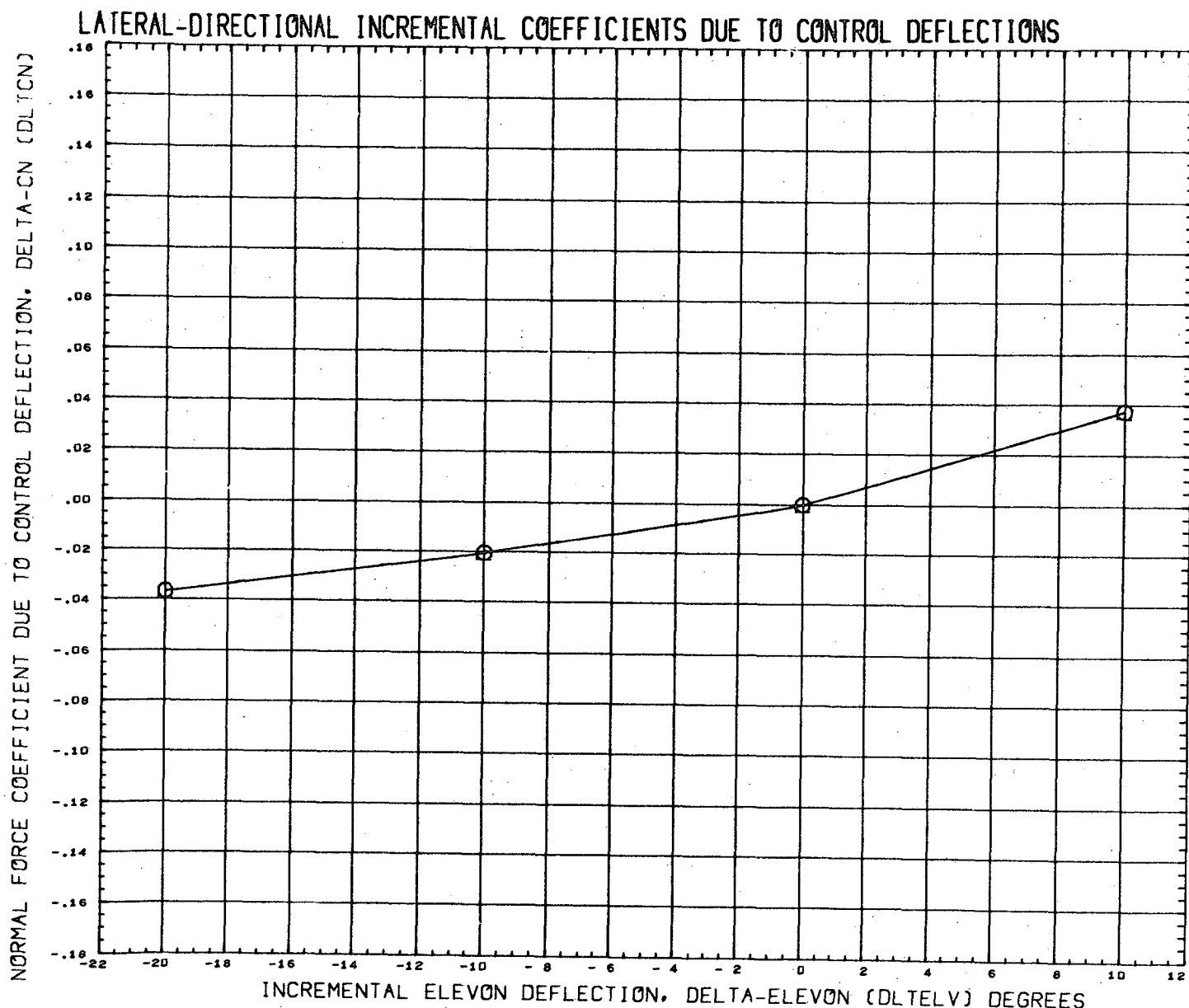
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	20.000	MACH 3.000 BETA 0.000	DATA SOURCE	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	DLTELV	LREF 3.0120 IN.
			DLTELV	BREF 6.0180 IN.
			DLTELV	XMRP 7.2990 IN.
			DLTELV	YMRP 0.0000 IN.
			DLTELV	ZMRP 0.0000 IN.
			DLTELV	SCALE 0.0035

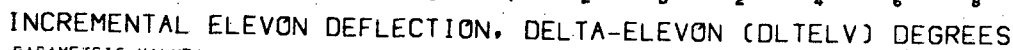
DATA HIST. CODE 1* C



SYMBOL Q	ALPHA	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION					
	23.000	MACH	3.000	BETA	0.000	DATA SET	DLTELV	SREF	14.9040	Sq. IN.	
	CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120	IN.
					S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.
									XMRF	7.2990	IN.
									YMRF	0.0000	IN.
									ZMRF	0.0000	IN.
									SCALE	0.0035	IN.

DATA HIST. CODE I&C

PITCHING MOMENT COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CLM(DLTCLM_{SYMB})



ALPHA
5.000

MACH
CANARD

PARAMETRIC VALUES

0.950

BETA

0.000

DATA SET

DATA SOURCE

CLTELY

DATASET DILEMMA

DATA SET 1 CLETV

REFERENCE INFORMATION

SREF 14.9040 SQ. IN.

LREF	3.0120	IN.
------	--------	-----

BREF 6.0180 IN.

XMRP 7.2590 IN.

YMRP.	0.0000	IN.
ZMRP.	0.0000	

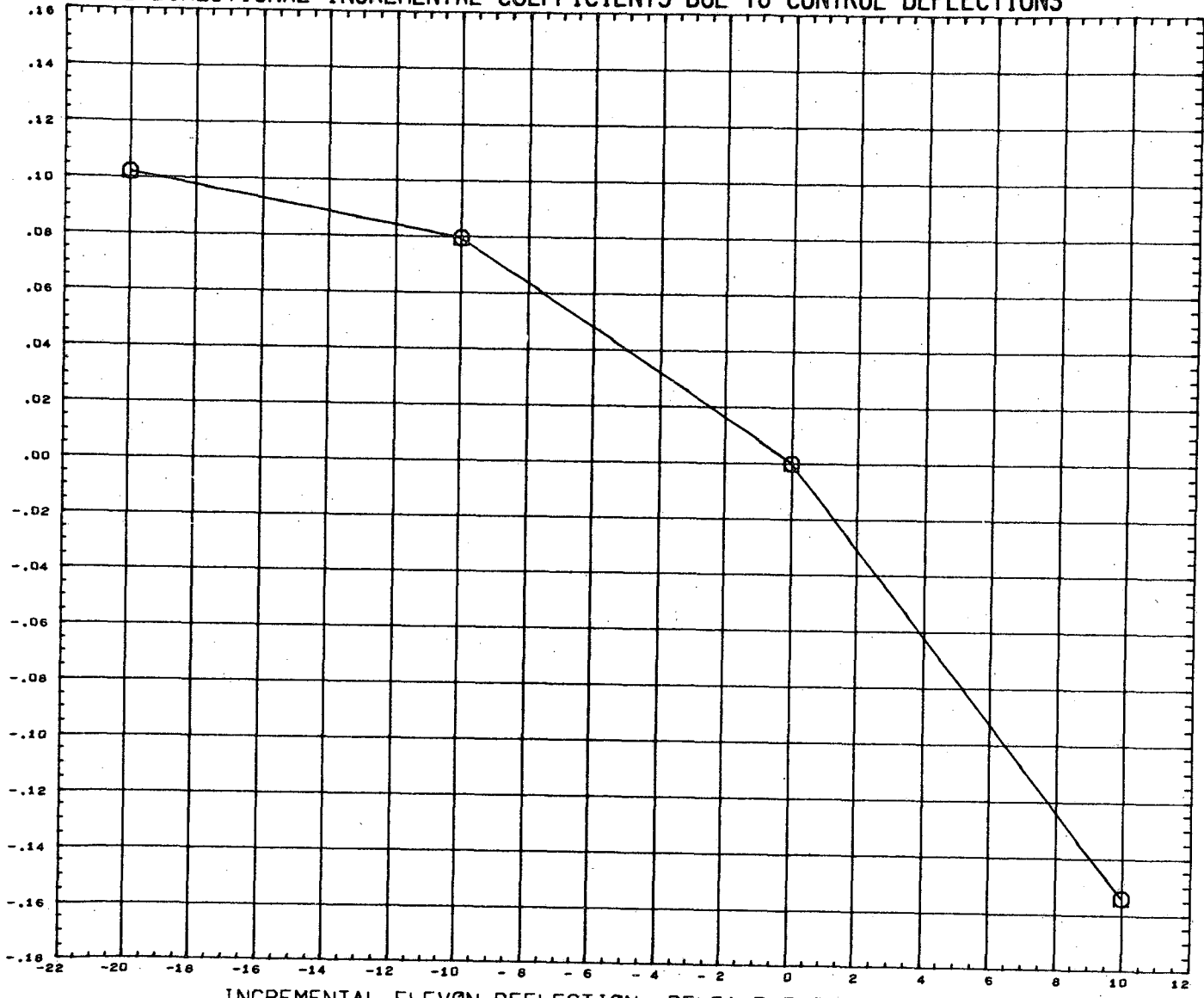
ZMRP	0.0000	IN.
SCALE	0.0035	

SCALE D.DG35

DATA HIST. CODE I#C

PITCHING MOMENT COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CLMDLTCM

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

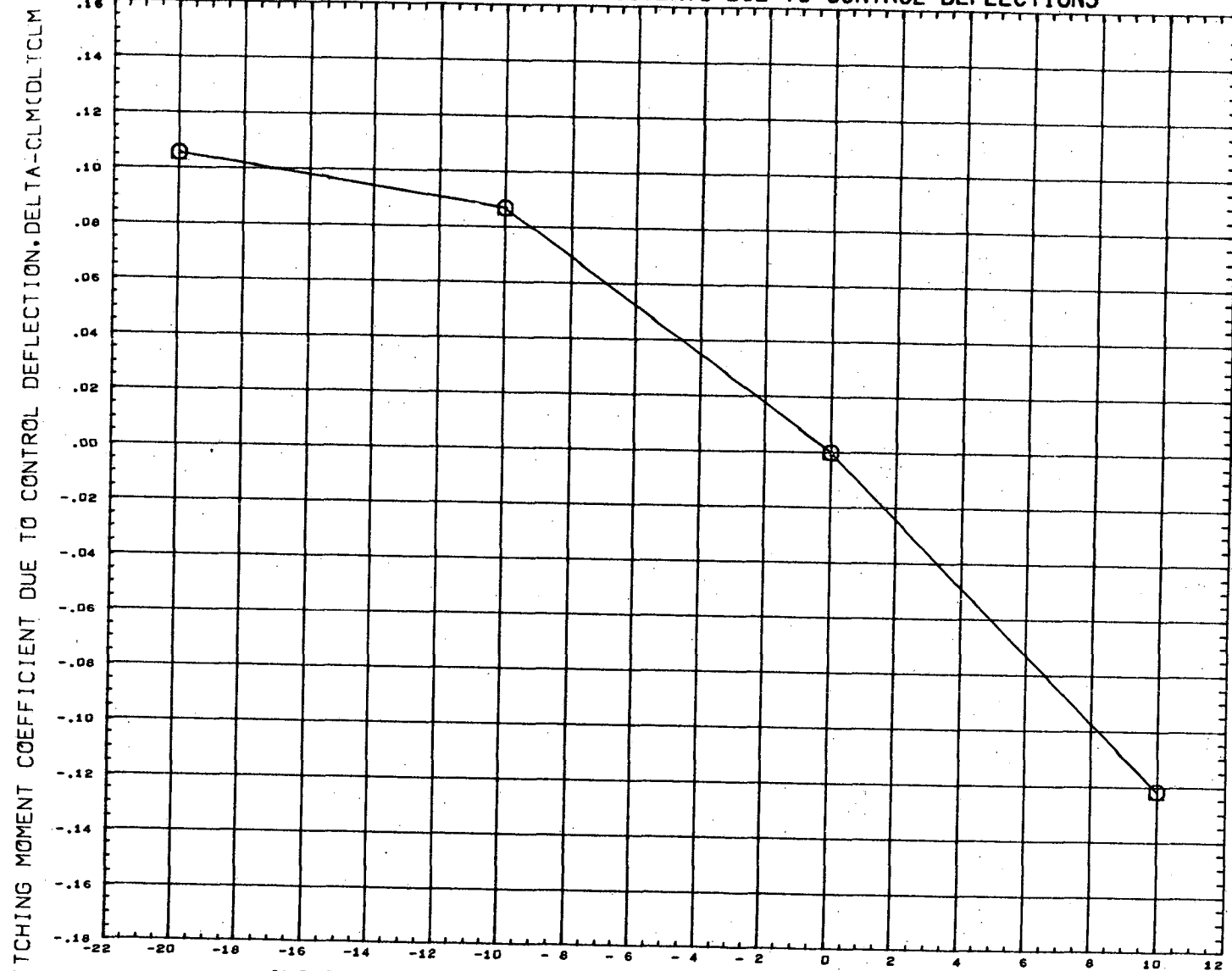


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SECTION SELECTION: DATA-EELEON (DLTELV) DEGREES													
SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
D	10.000	<u>MACH</u>	0.900	BETA	0.000	DATASET	DLTELV	DATASET	DLTELV	SREF	14.9040	SQ. IN.	
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120	IN.	
						S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.	
										XMRF	7.2990	IN.	
										YMRF	0.0000	IN.	
										ZMRF	0.0000	IN.	
										SCALE	0.0035	IN.	
		DATA HIST. CODE	I#C										

DATA HIST. CODE I*C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



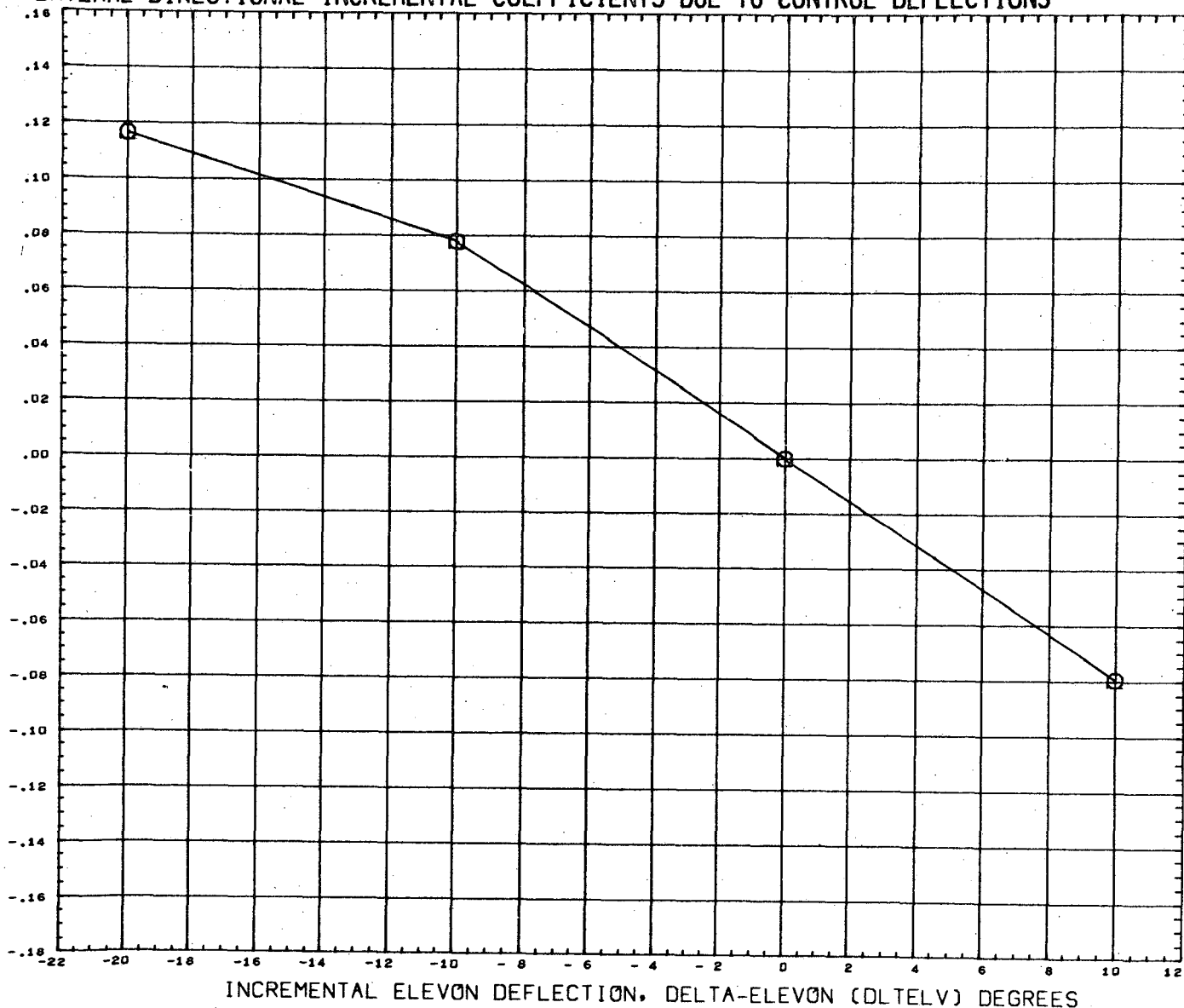
INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	MACH	CANARD	PARAMETRIC VALUES	BETA	RUDDER	DATA SOURCE	DATASET	DLTELV	DATASET	DLTELV	SREF	LREF	BREF	XMRRP	YMRP	ZMRP	SCALE	REFERENCE INFORMATION	SQ. IN.
D	15.000			0.900	0.000	0.000		S35EAB	-20.000	S35EAC	-10.000	14.9040	3.0120	6.0180	7.2990	0.0000	0.0000	0.0035		IN.
				0.000	0.000	0.000		S35EAO	0.000	S35EAA	10.000									IN.

DATA HIST. CODE I&C

PITCHING MOMENT COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CLMDLCLM

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



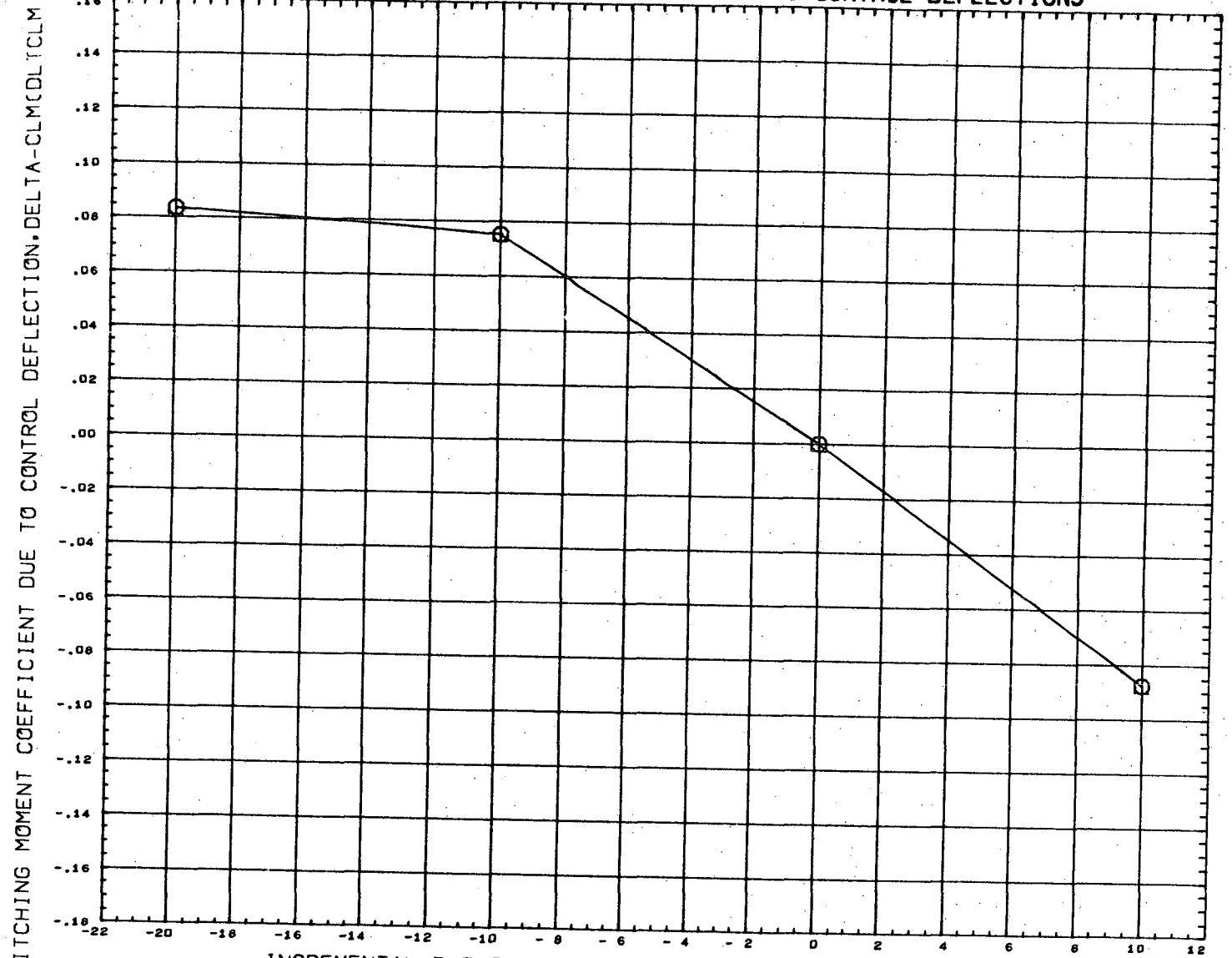
INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION		
Q	20.000	CANARD	0.900	BETA	0.000	0.000	SREF	14.9040	58. IN.
			0.000	RUDDER	0.000	0.000	LREF	3.0120	IN.
					0.000	0.000	BREF	6.0180	IN.
					0.000	0.000	XMRF	7.2990	IN.
					0.000	0.000	YMRF	0.0000	IN.
					0.000	0.000	ZMRF	0.0000	IN.
					0.000	0.000	SCALE	0.0035	

DATA HIST. CODE 1&C

80

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

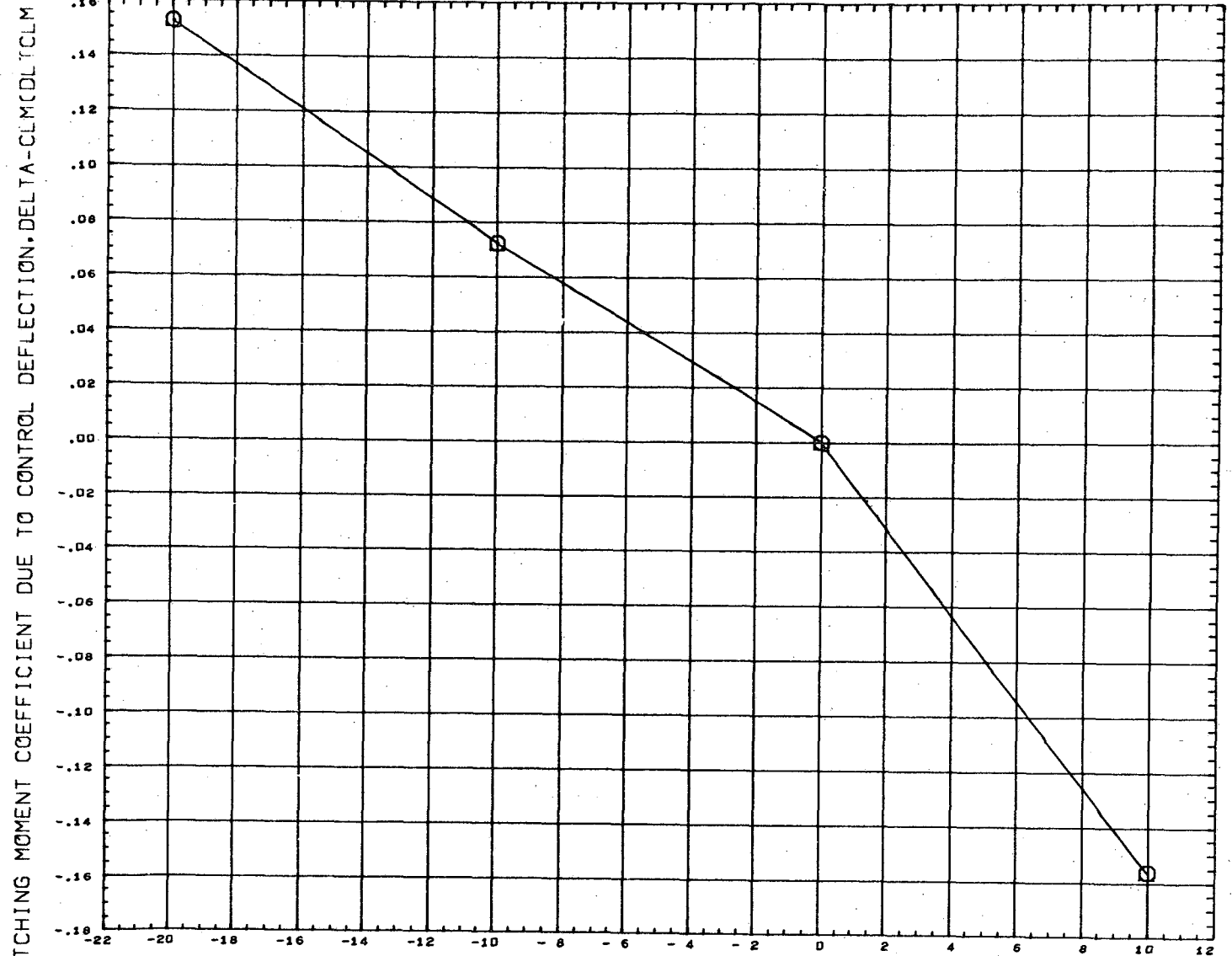


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	23.000	MACH 0.900 BETA 0.000	DATASET DLTELV	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	S35EAB - 20.000 S35EAC - 10.000	LREF 3.0120 IN.
			S35EAO 0.000 S35EAA 10.000	BREF 6.0180 IN.
				XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I* C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

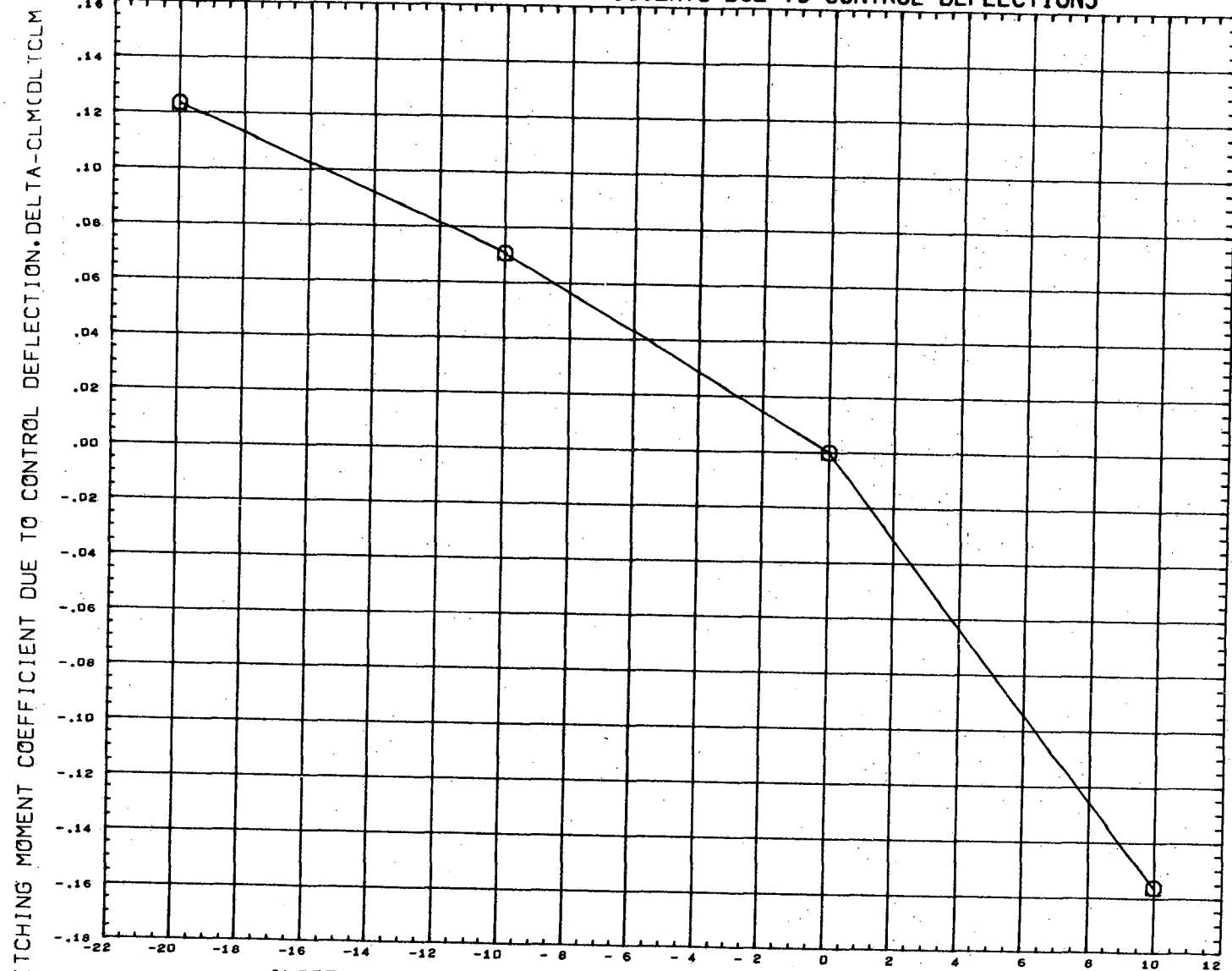


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
D	5.000	MACH 1.000 BETA 0.000	DATA SOURCE	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	DLTELV	LREF 3.0120 IN.
			DLTELV	BREF 6.0180 IN.
			DLTELV	XMRF 7.2990 IN.
			DLTELV	YMRF 0.0000 IN.
			DLTELV	ZMRF 0.0000 IN.
			DLTELV	SCALE 0.0035

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

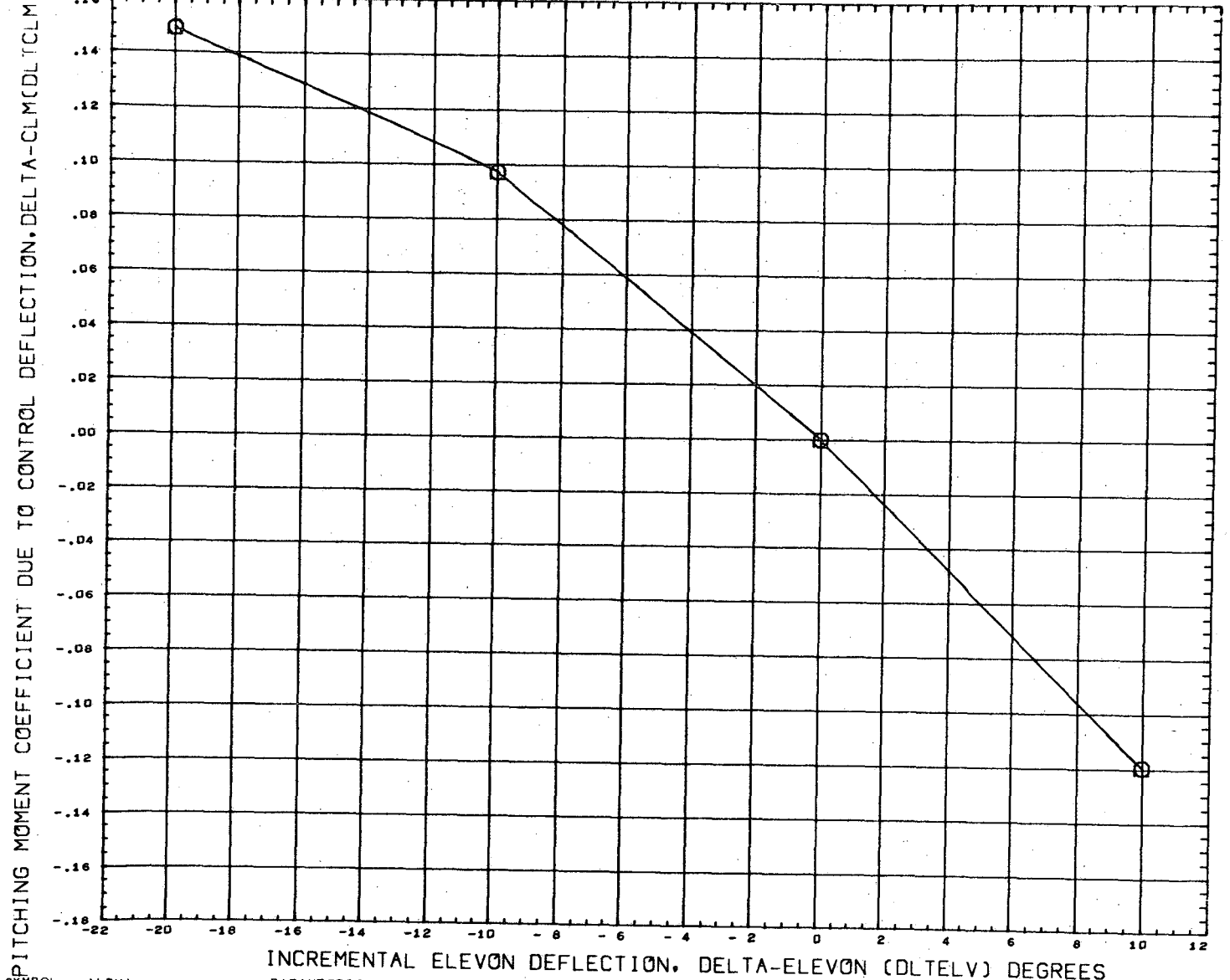


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELX) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	10.000	MACH 1.000 BETA 0.000	DATA SOURCE	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	DLTELX	LREF 3.0120 IN.
			DATA SET	BREF 6.0180 IN.
			DLTELX	XMRF 7.2990 IN.
			S35EAB - 20.000	YMRF 0.0000 IN.
			S35EAC - 10.000	ZMRF 0.0000 IN.
			S35EAO 0.000	S35EAA 10.000
				SCALE 0.0035

DATA HIST. CODE I=C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



SYMBOL Δ PITCHING MOMENT COEFFICIENT DUE TO CONTROL DEFLECTION, $\Delta CL_{MDLTCLM}$

ALPHA 15.000 MACH 1.000 BETA 0.000 DATASET DLTELV DATASET DLTELV SREF 14.9040 SQ. IN.

CANARD 0.000 RUDDER 0.000 S35EAB -20.000 S35EAC -10.000 LREF 3.0120 IN.

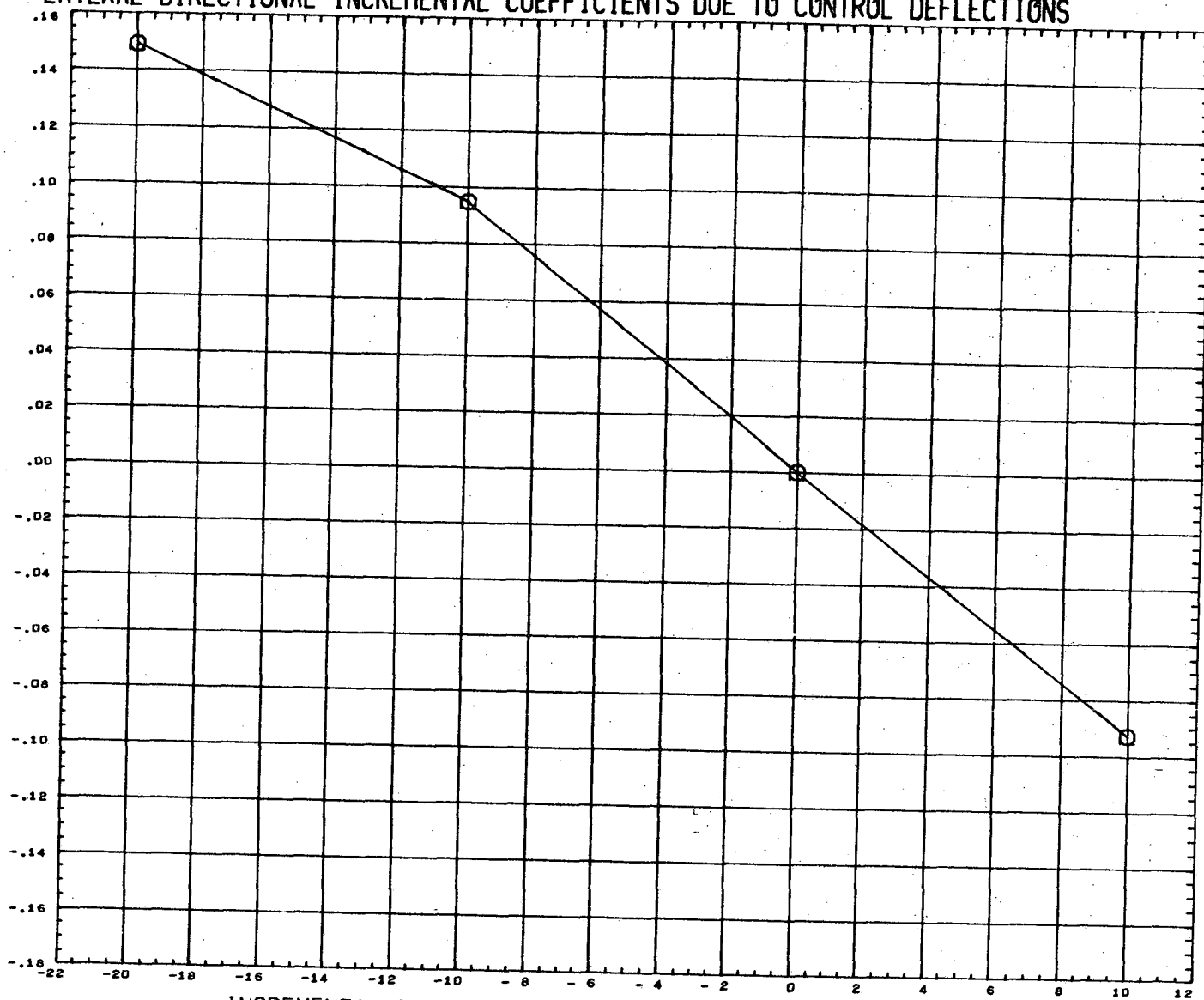
S35EAO 0.000 S35EAA 10.000 BREF 6.0160 IN.

DATA HIST. CODE I&C YMRP 7.2990 IN.

ZMRP 0.0000 IN.

SCALE 0.0035 IN.

PITCHING MOMENT COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CLM(DLTC LM)



INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL
O

ALPHA
20.000

MACH
CANARD

PARAMETRIC VALUES

1.000	BETA
0.000	RUDDER

BETA
RUCC

0.000
0.000

DATA
63554

DATA SOURCE

DLTELV

DATASET DLTELV

S35EAB - 20.000

DATASET

GLTEI

S35EAC - 10.000

S35EAA	10.000
--------	--------

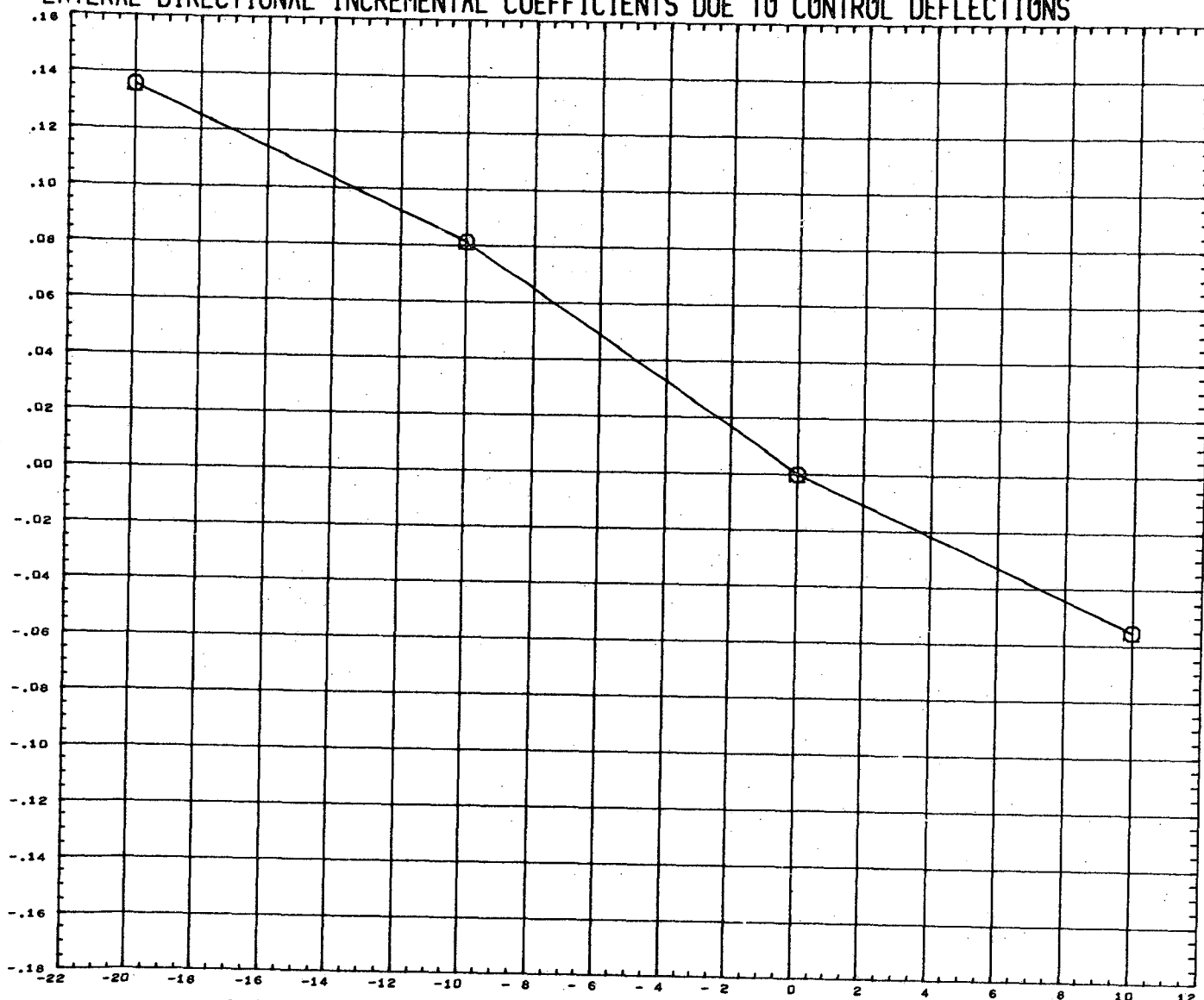
REFERENCE INFORMATION

SREF	14.9040	SQ. IN.
LREF	3.0120	IN.
BREF	6.0180	IN.
XMRF	7.2990	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0035	

DATA HIST. CODE I#C

PITCHING MOMENT COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CLMCDLCLM

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

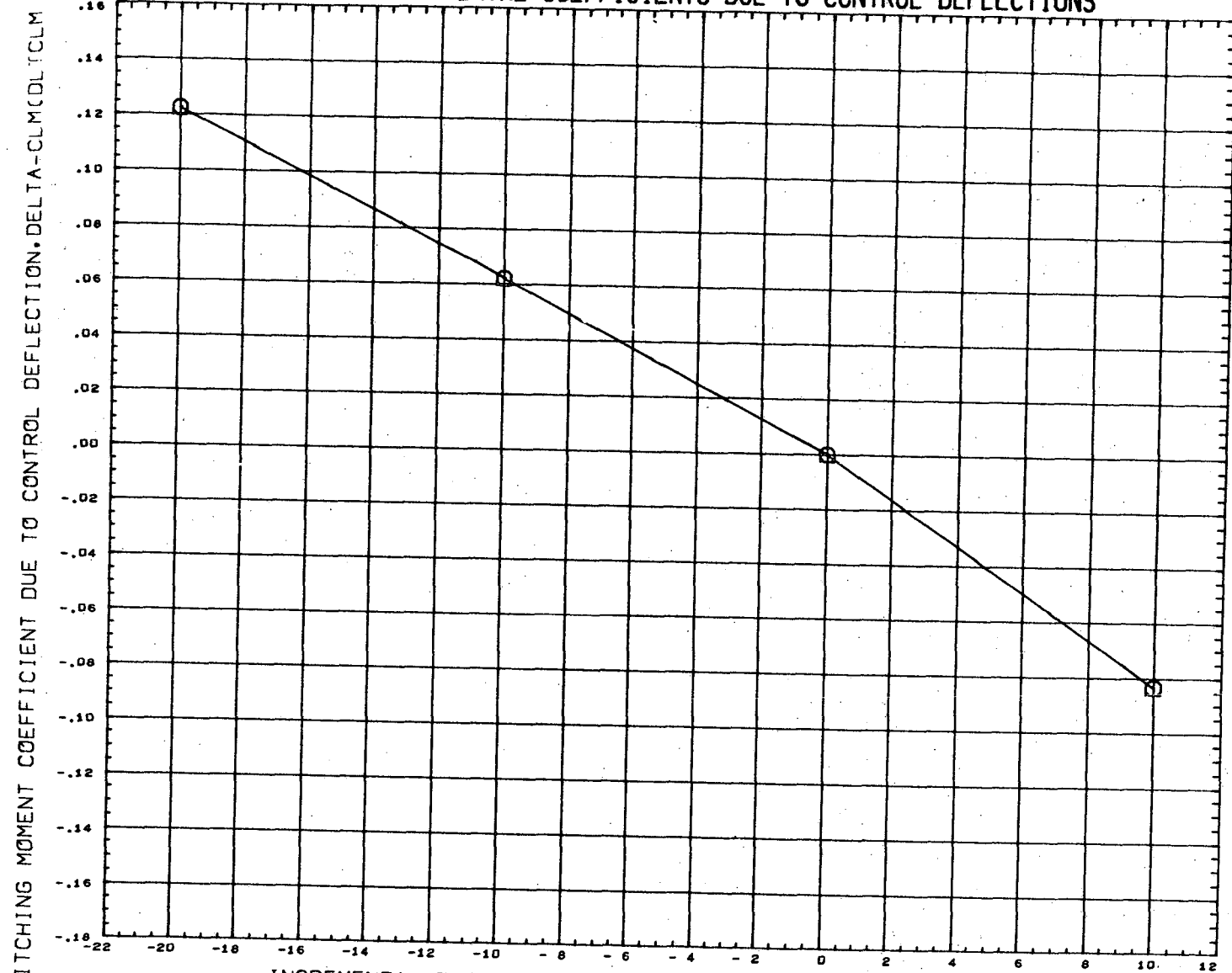


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTEL V) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	23.000	MACH 1.000 BETA 0.000	DATA SET DLTEL V	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	S35EAB - 20.000 S35EAC - 10.000	LREF 3.0120 IN.
			S35EAO 0.000 S35EAA 10.000	BREF 6.0180 IN.
				XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I* C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

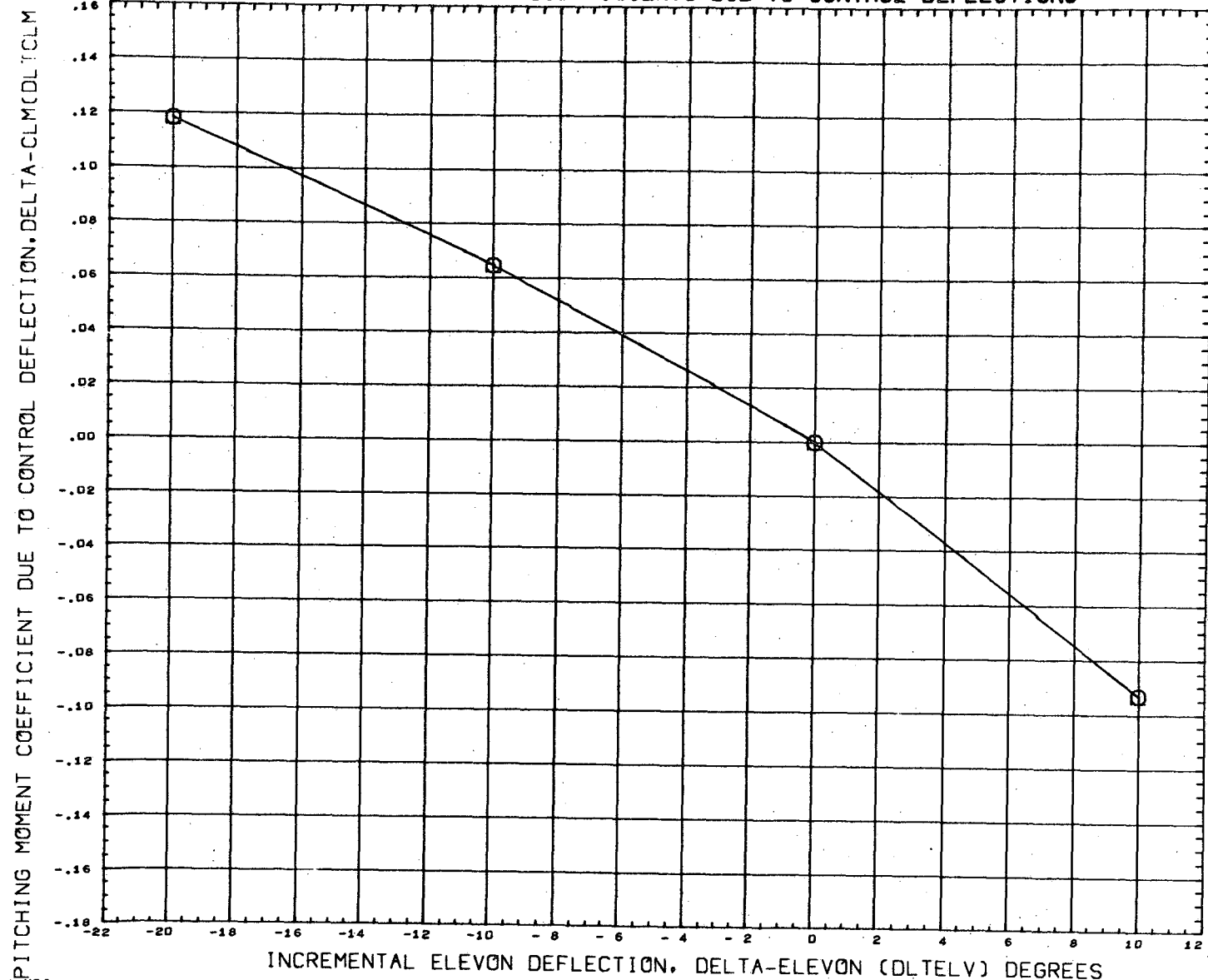


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	5.000	MACH 1.200 BETA 0.000	DATA SET DLTELV	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	S35EAB - 20.000 S35EAC - 10.000	LREF 3.0120 IN.
			S35EAO 0.000 S35EAA 10.000	BREF 6.0180 IN.
				XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

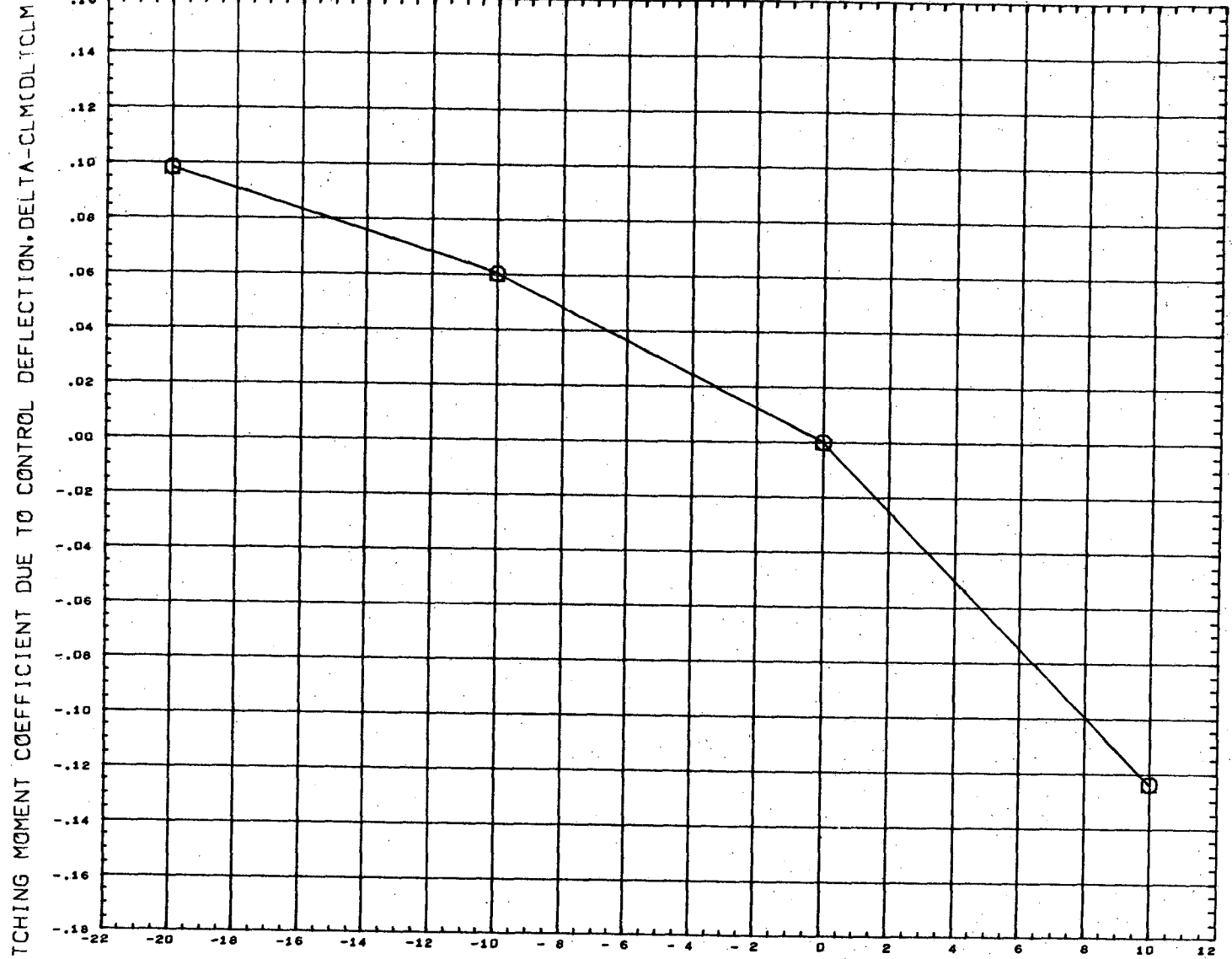


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	BETA	DATA SOURCE	DLTELV	DATA SOURCE	DLTELV	SREF	14.9040	SQ. IN.
D	10.000	CANARD	1.200	0.000	S35EAB	-20.000	S35EAC	-10.000	LREF	3.0120	IN.
			0.000	0.000	S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.
									XMRP	7.2990	IN.
									YMRP	0.0000	IN.
									ZMRP	0.0000	IN.
									SCALE	0.0035	IN.

DATA HIST. CODE I*C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



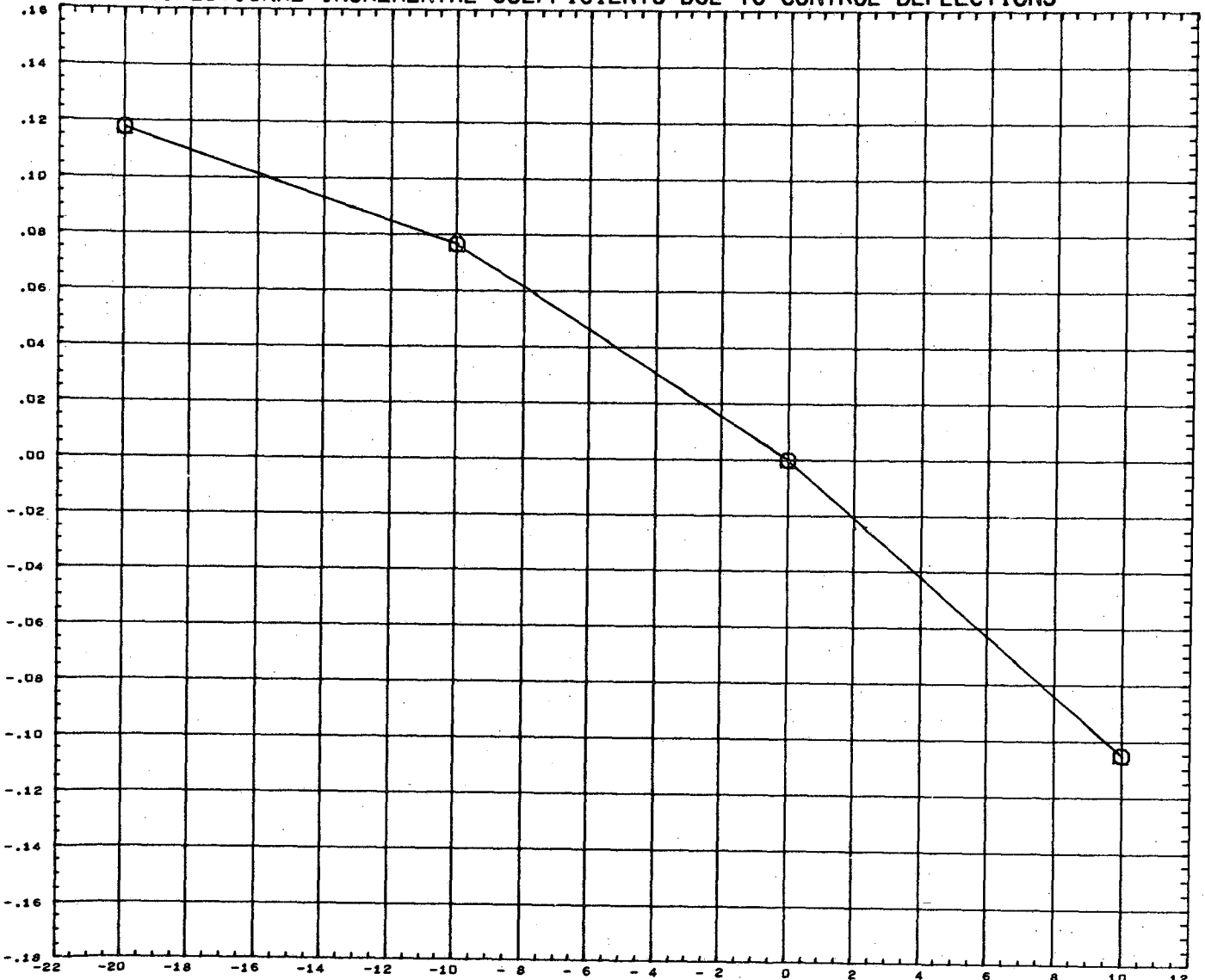
INCREMENTAL ELEVON DEFLECTION, Δ -ELEVON (DLTEL V) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	15.000	MACH 1.200 BETA 0.000	DATASET DLTEL V DATASET DLTEL V	SREF 14.9040 90.IN.
		CANARD 0.000 RUDDER 0.000	S35EAB - 20.000 S35EAC - 10.000	LREF 3.0120 IN.
			S35EAO 0.000 S35EAA 10.000	BREF 6.0180 IN.
				XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I#C

PITCHING MOMENT COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CLMCLM

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

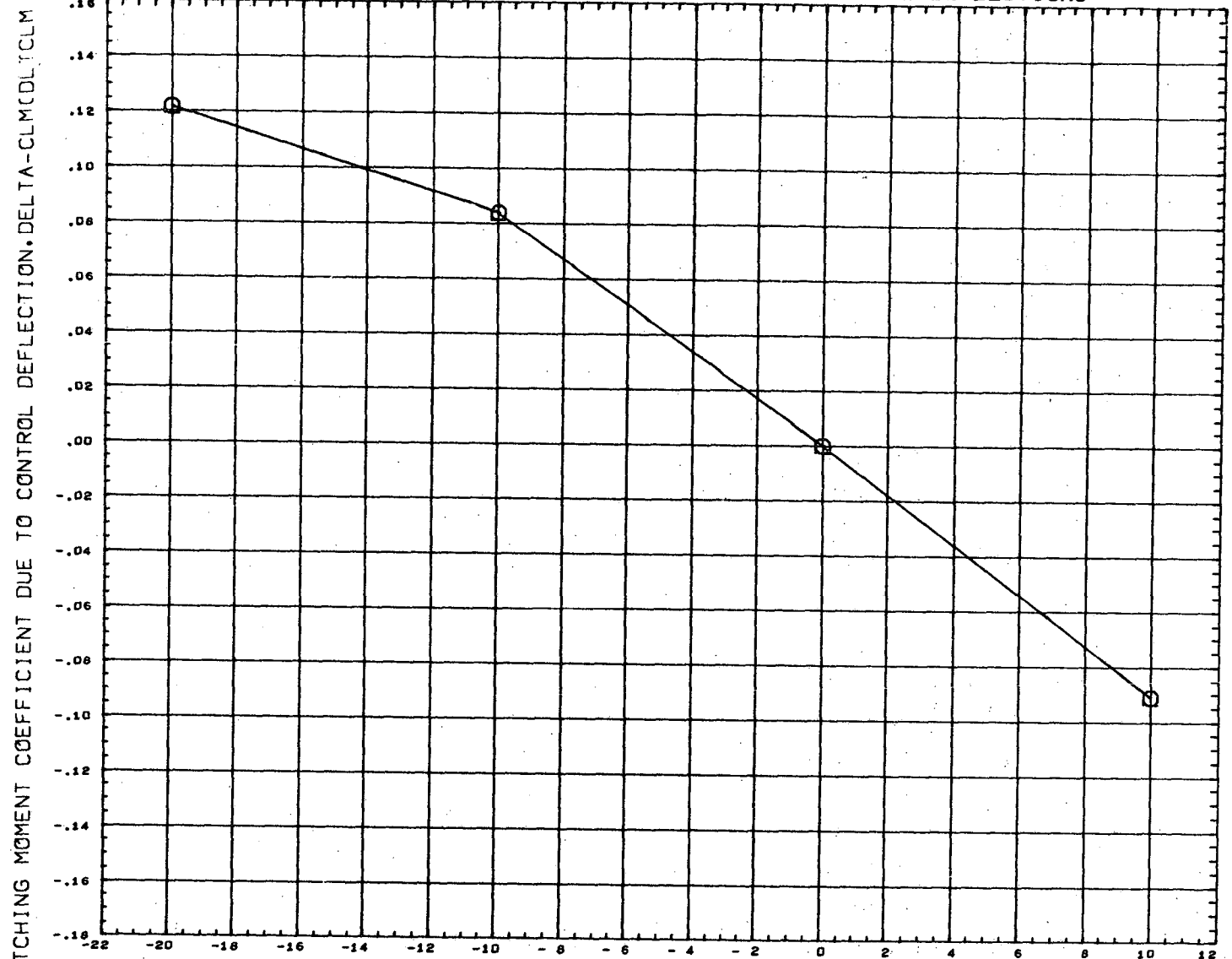


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTEL V) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
D	20.000	MACH 1.200 BETA 0.000	DATA SOURCE	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	DLTEL V DATASET DLTEL V	LREF 3.0120 IN.
			S35EAB - 20.000 S35EAC - 10.000	BREF 6.0180 IN.
			S35EAO 0.000 S35EAA 10.000	XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

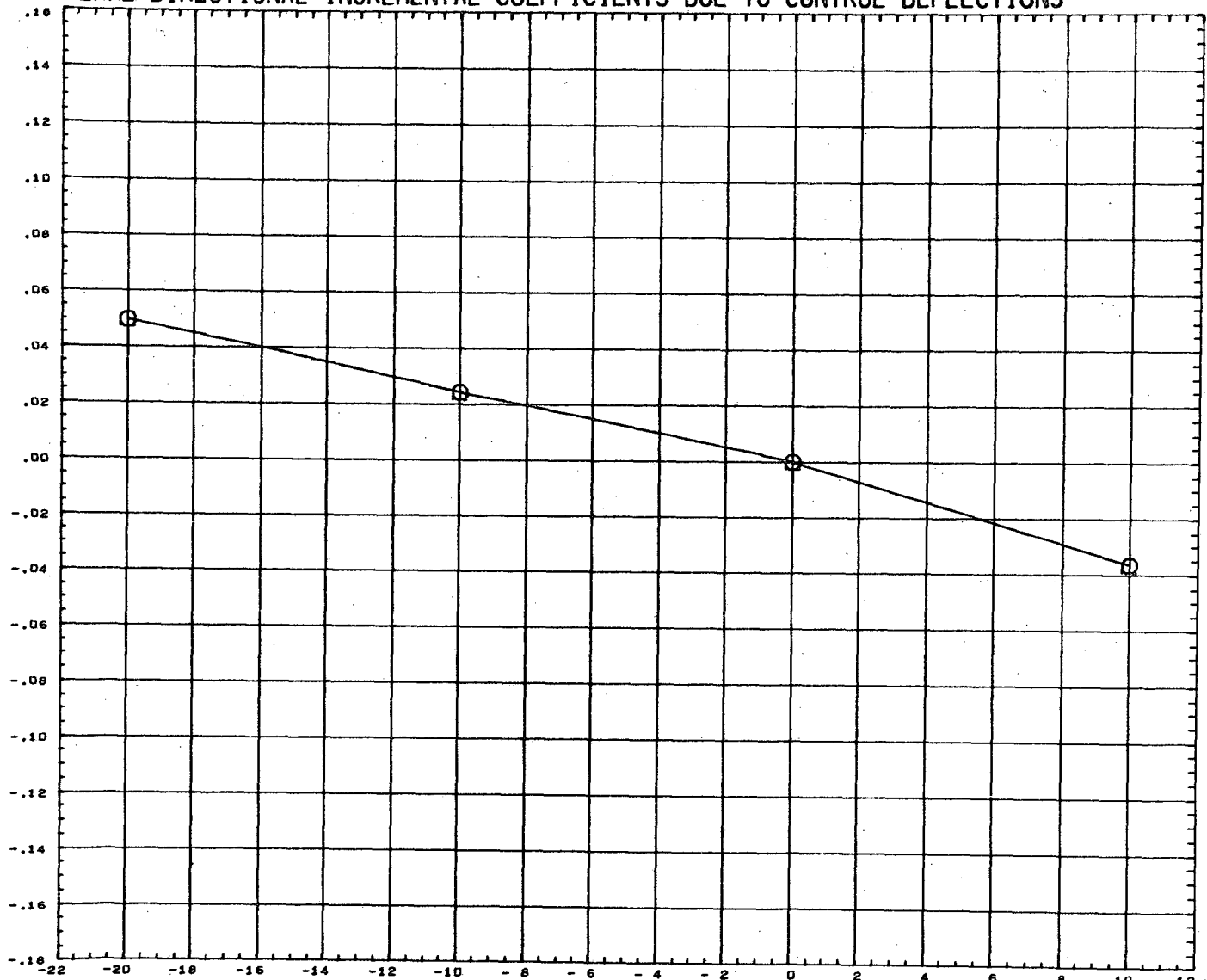


SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	BETA	DATA SOURCE	DLTELV	DLTELV	DLTELV	REFERENCE INFORMATION	SQ. IN.
D	23.000	CANARD	0.000	0.000	S35EAB	-20.000	S35EAC	-10.000	SREF	14.9040
			0.000	0.000	S35EAO	0.000	S35EAA	10.000	LREF	3.0120
									BREF	6.0180
									XMRP	7.2990
									YMRP	0.0000
									ZMRP	0.0000
									SCALE	0.0035

DATA HIST. CODE I*0

PITCHING MOMENT COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CLMCDLCLM

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

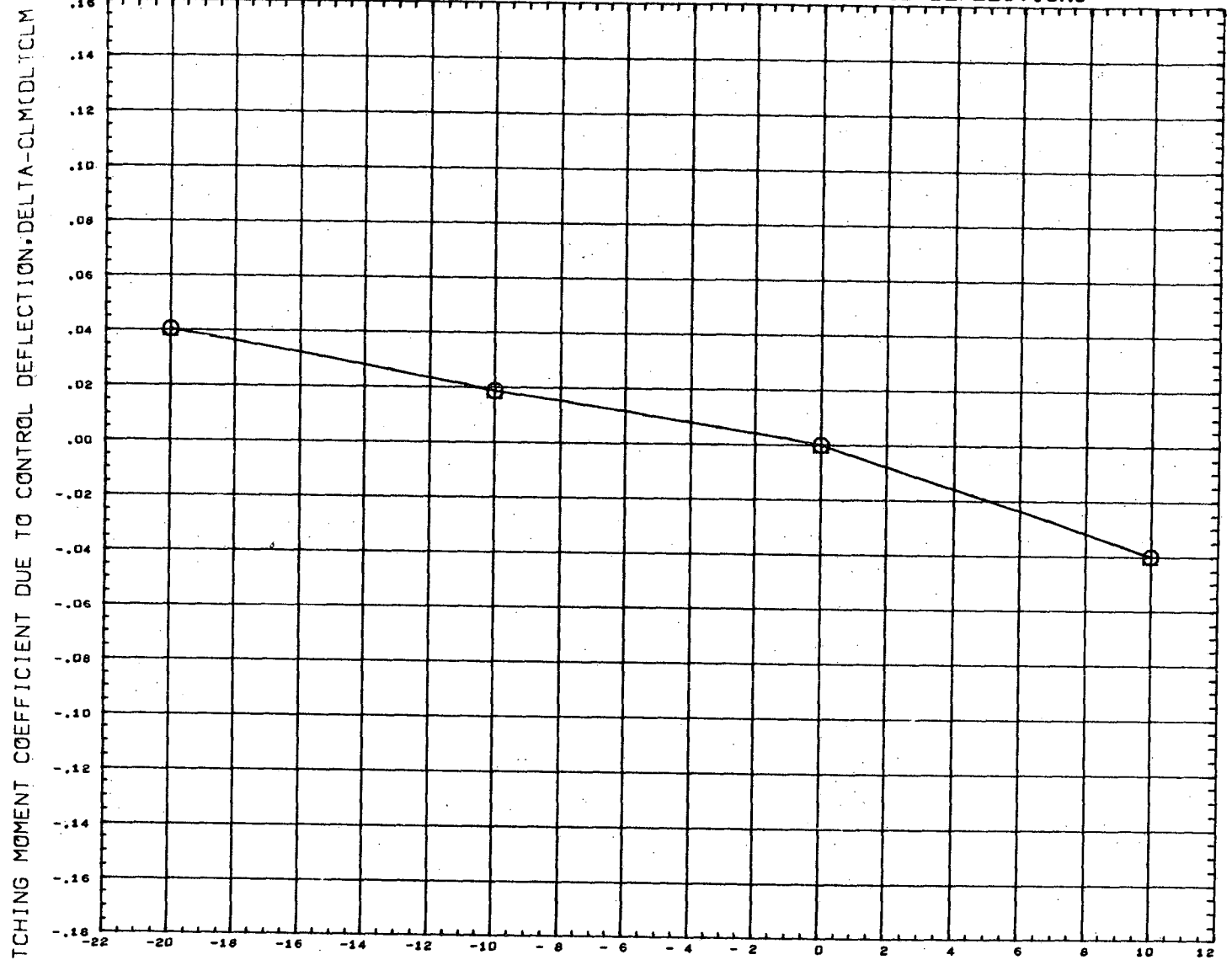


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION		
	ALPHA	BETA	DLTELV	DLTELV	SREF	LREF	SQ. IN.
Q	5.000	2.000	0.000	S35EAB - 20.000	14.9040	3.0120	IN.
	CANARD	0.000	0.000	S35EAC - 10.000	6.0180	6.0180	IN.
				S35EAO 0.000	7.2990	7.2990	IN.
					YMRP	0.0000	IN.
					ZMRP	0.0000	IN.
					SCALE	0.0035	IN.

DATA HIST. CODE I+C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



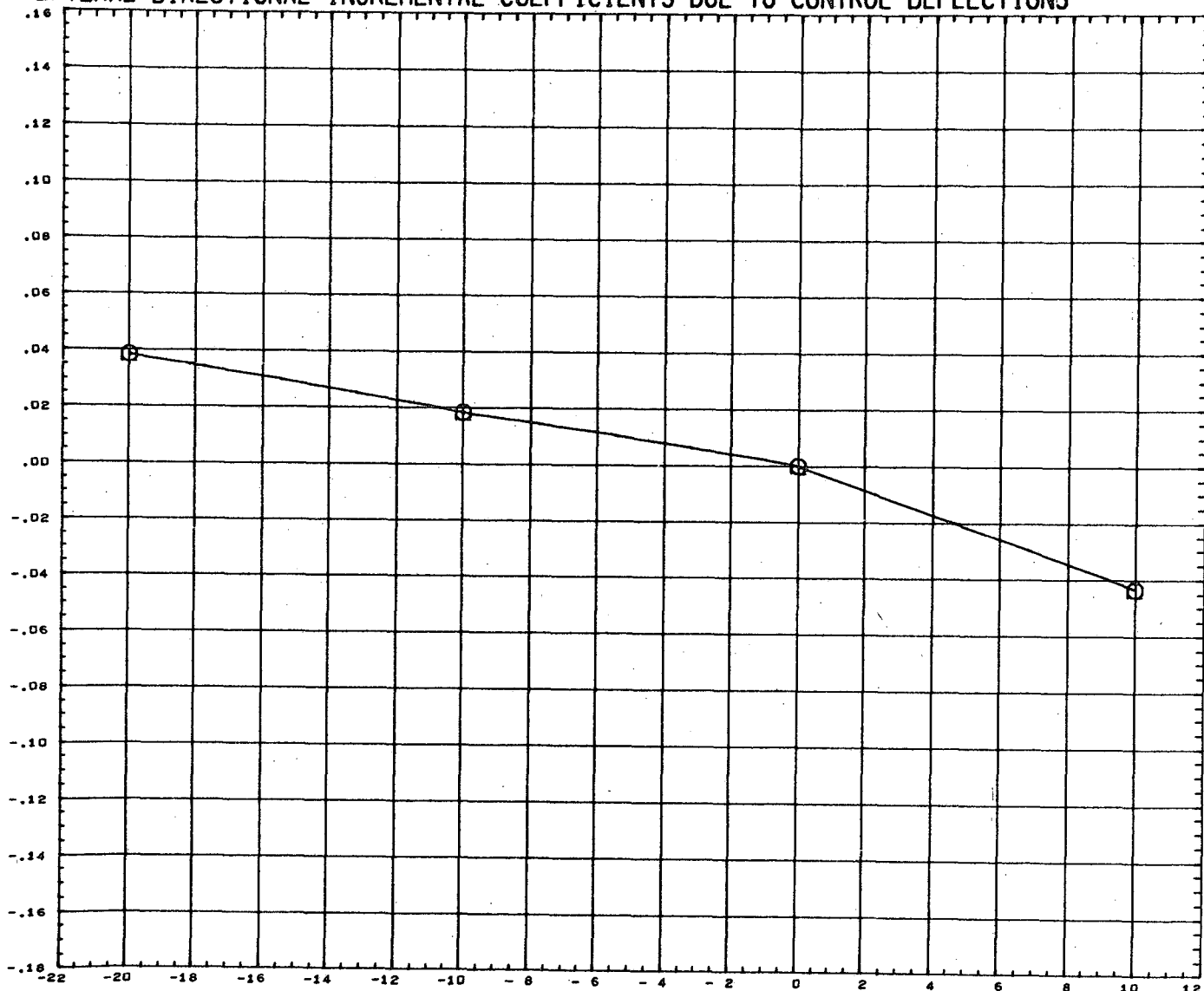
INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELX) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	10.000	MACH 2.000 BETA 0.000	DATASET DLTELX DATASET DLTELX	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	S35EAB - 20.000 S35EAC - 10.000	LREF 3.0120 IN.
			S35EAO 0.000 S35EAA 10.000	BREF 6.0180 IN.
				XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE 1#C

PITCHING MOMENT COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CLMDLTCM

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

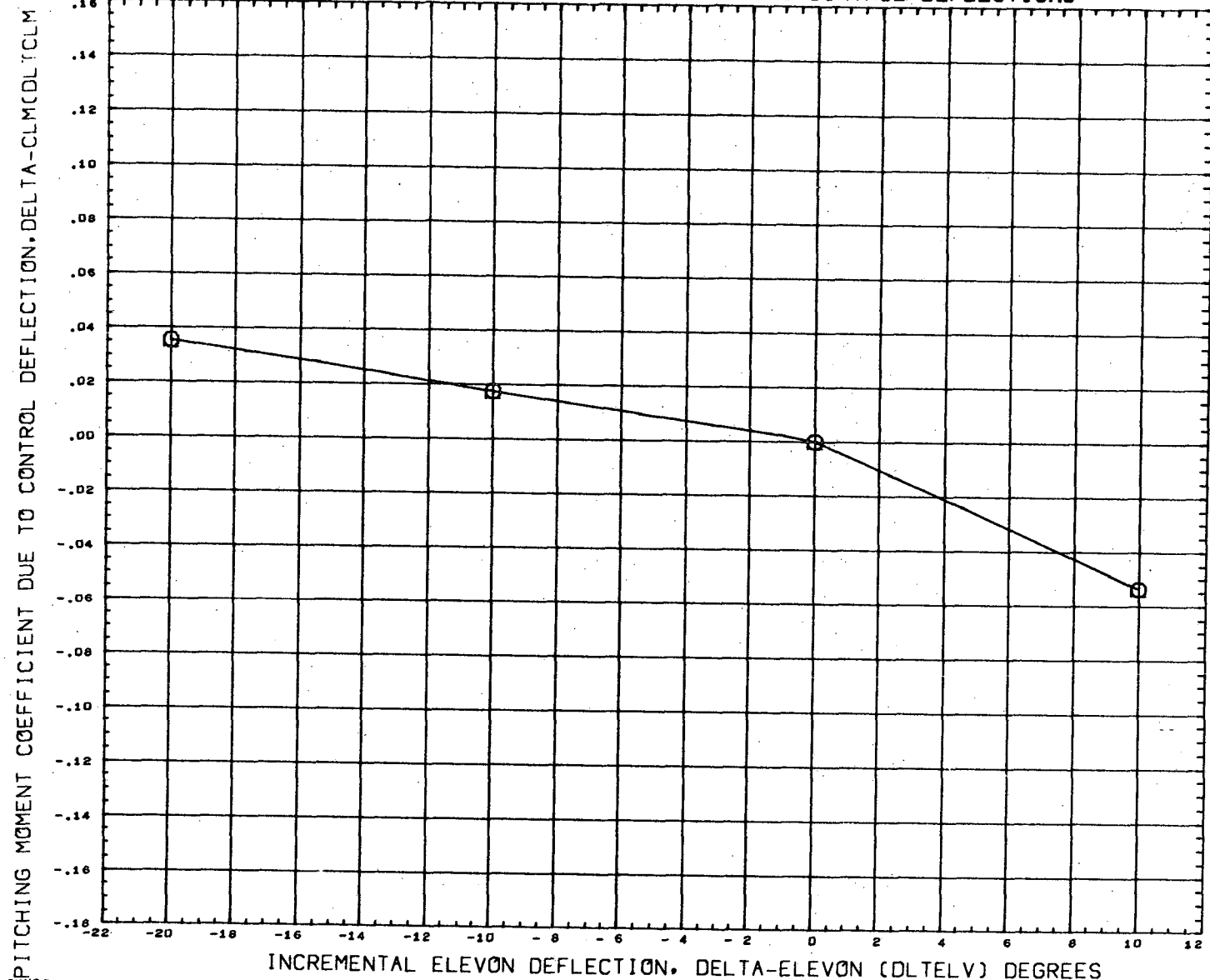


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	BETA	DATA SOURCE	DLTELV	DLTELV	DLTELV	DLTELV	SREF	14.9040	SQ. IN.
Q	15.000	CANARD	0.000	RUDDER	0.000	S35EAB	-20.000	S35EAC	-10.000	LREF	3.0120	IN.
			0.000			S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.
										YMRP	7.2990	IN.
										ZMRP	0.0000	IN.
										SCALE	0.0035	

DATA HIST. CODE I* C

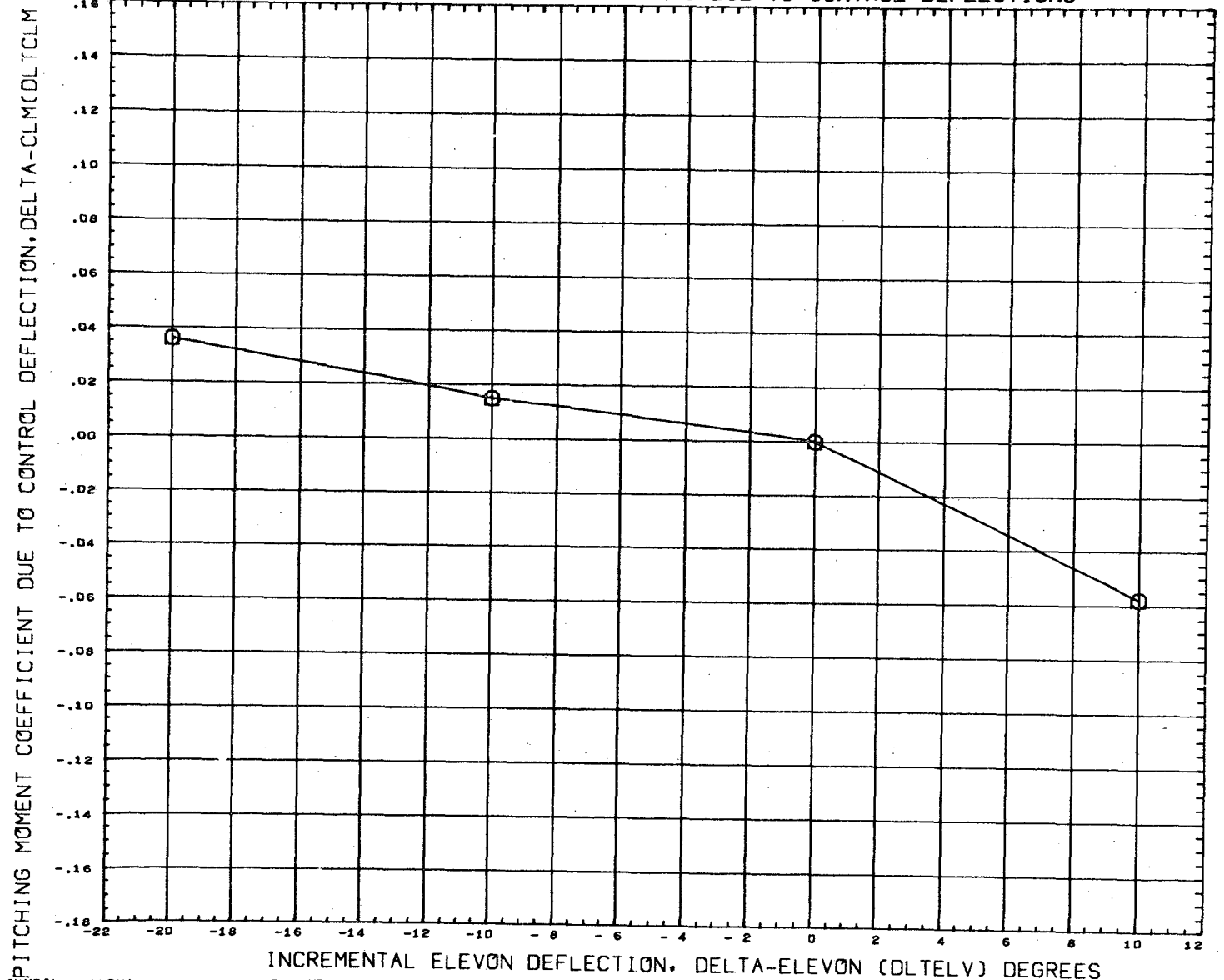
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION				
Q	20.000	MACH	2.000	BETA	0.000	DATASET	DLTEL V	SREF	14.9040	SQ. IN.
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	IN.
						S35EAO	0.000	S35EAA	10.000	IN.
								BREF	6.0180	IN.
								XMRP	7.2990	IN.
								YMRP	0.0000	IN.
								ZMRP	0.0000	IN.
								SCALE	0.0035	

DATA HIST. CODE I&C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

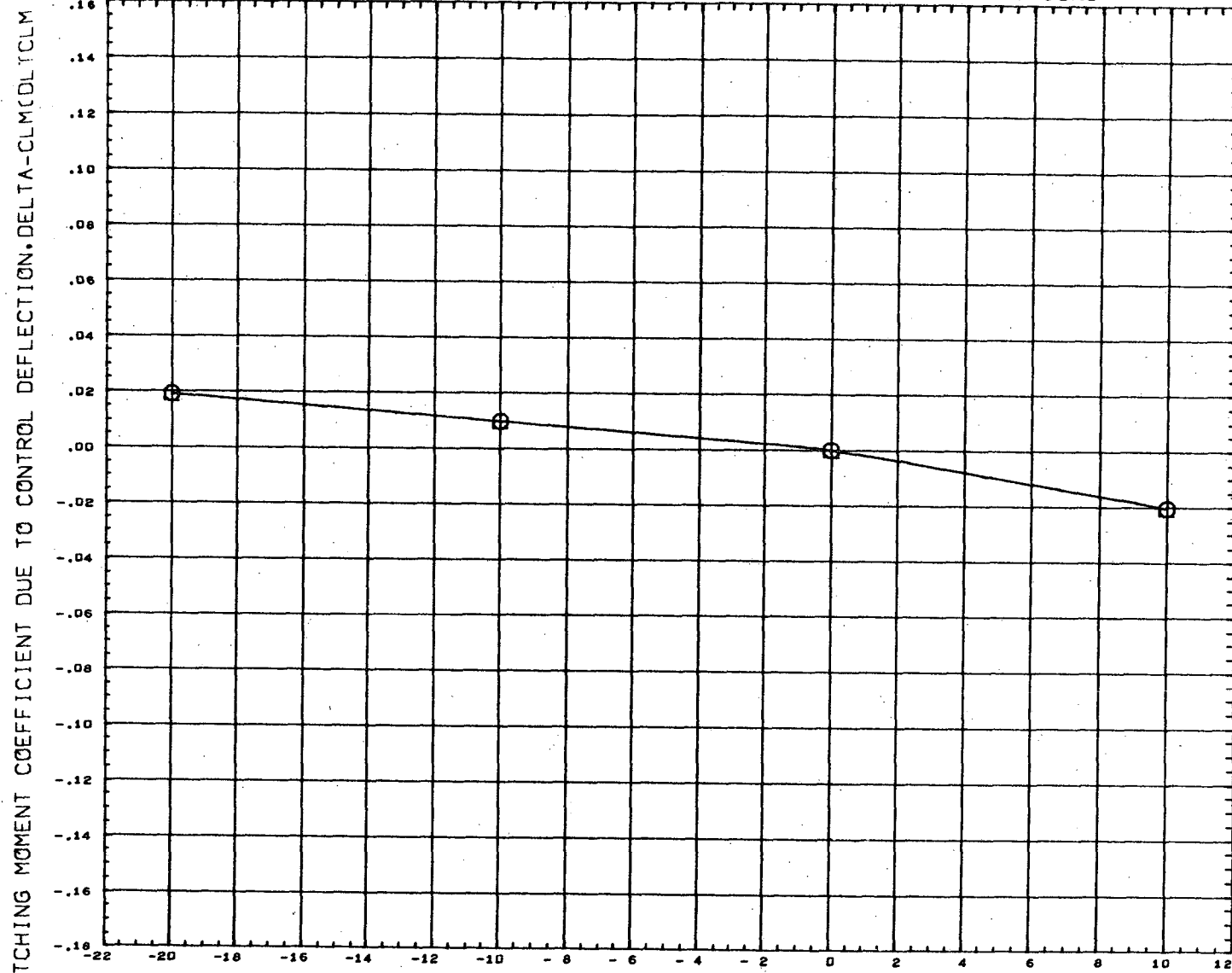


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	23.000	MACH 2.000 BETA 0.000	DATA SOURCE	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	DLTELV	LREF 3.0120 IN.
			DATA SOURCE	BREF 6.0160 IN.
			DLTELV	YMRP 7.2990 IN.
			DATA SOURCE	ZMRP 0.0000 IN.
			DLTELV	SCALE 0.0035

DATA HIST. CODE I+C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

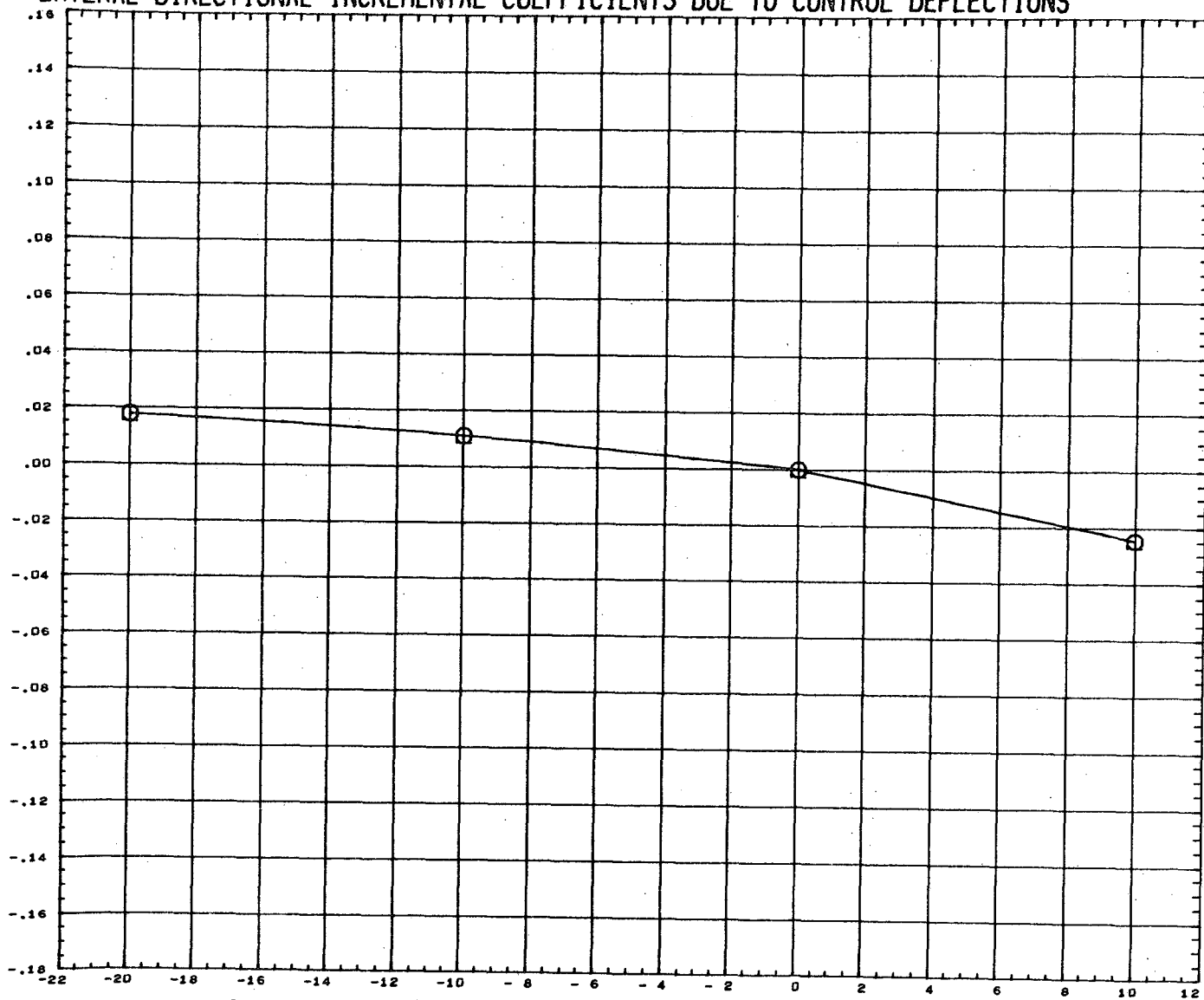


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SECTION DEFINITION DATA ELEVON (DETLEV) DEGREES												
SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
Q	5.000	<u>MACH</u>	3.000	BETA	0.000	DATASET	DLTELV	DATASET	DLTELV	SREF	14.9040	SQ. IN.
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120	IN.
						S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.
										XMRP	7.2990	IN.
										YMRP	0.0000	IN.
										ZMRP	0.0000	IN.
										SCALE	0.0035	
		DATA HIST. CODE	I * C									

DATA HIST. CODE I*C

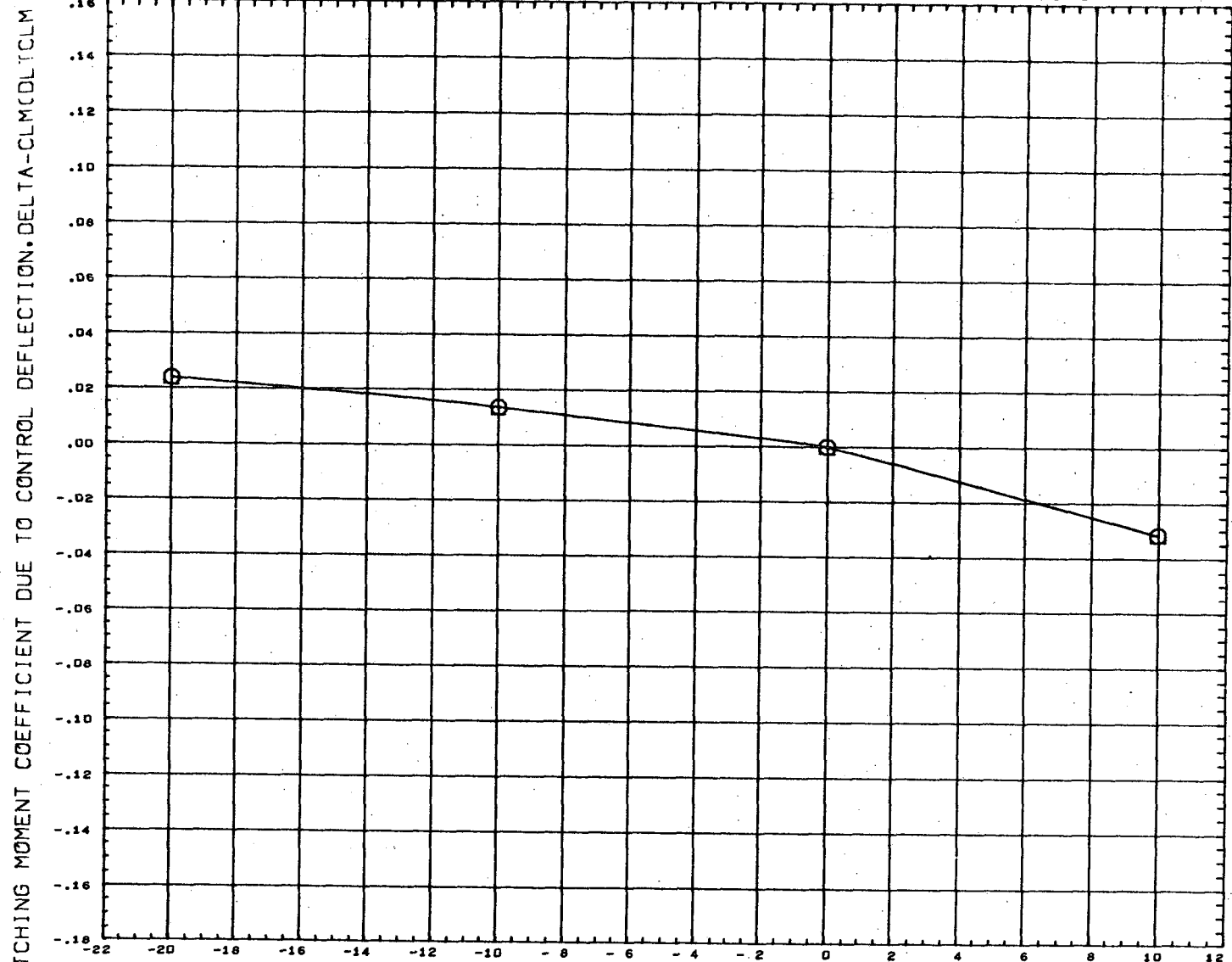
PITCHING MOMENT COEFFICIENT DUE TO CONTROL DEFLECTION, $\Delta C_{LMDLTCLM}$



INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SOURCE	DATA SOURCE	REFERENCE INFORMATION
ALPHA 10.000	MACH 3.000 BETA D.000	\$REF 14.9040 SQ.IN.
CANARD	D.000 RUDDER D.000	LREF 3.0120 IN. BREF 6.0180 IN. XMRP 7.2990 IN. YMRP 0.0000 IN. ZMRP 0.0000 IN. SCALE 0.0035
PARAMETRIC VALUES		
DATA HIST. CODE I% C		

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

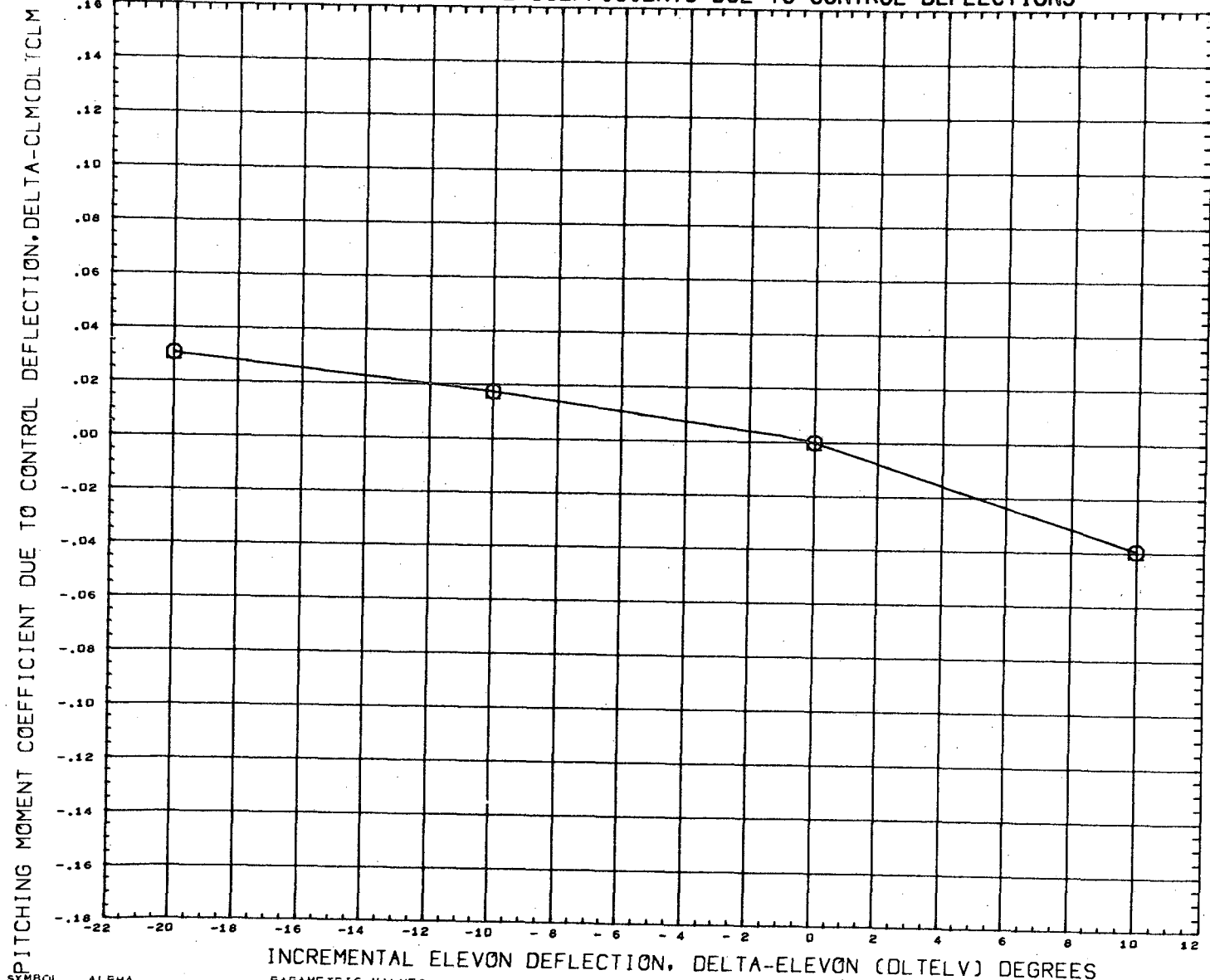


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES			DATA SOURCE				REFERENCE INFORMATION			
Q	15.000	<u>MACH</u>	3.000	BETA	0.000	DATASET	DLTELV	DATASET	DLTELV	SREF	14.9040	59. IN.
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120	IN.
						S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.
										XMRP	7.2990	IN.
										YMRP	0.0000	IN.
										ZMRP	0.0000	IN.
										SCALE	0.0035	
		DATA MIST. CODE	I#C									

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

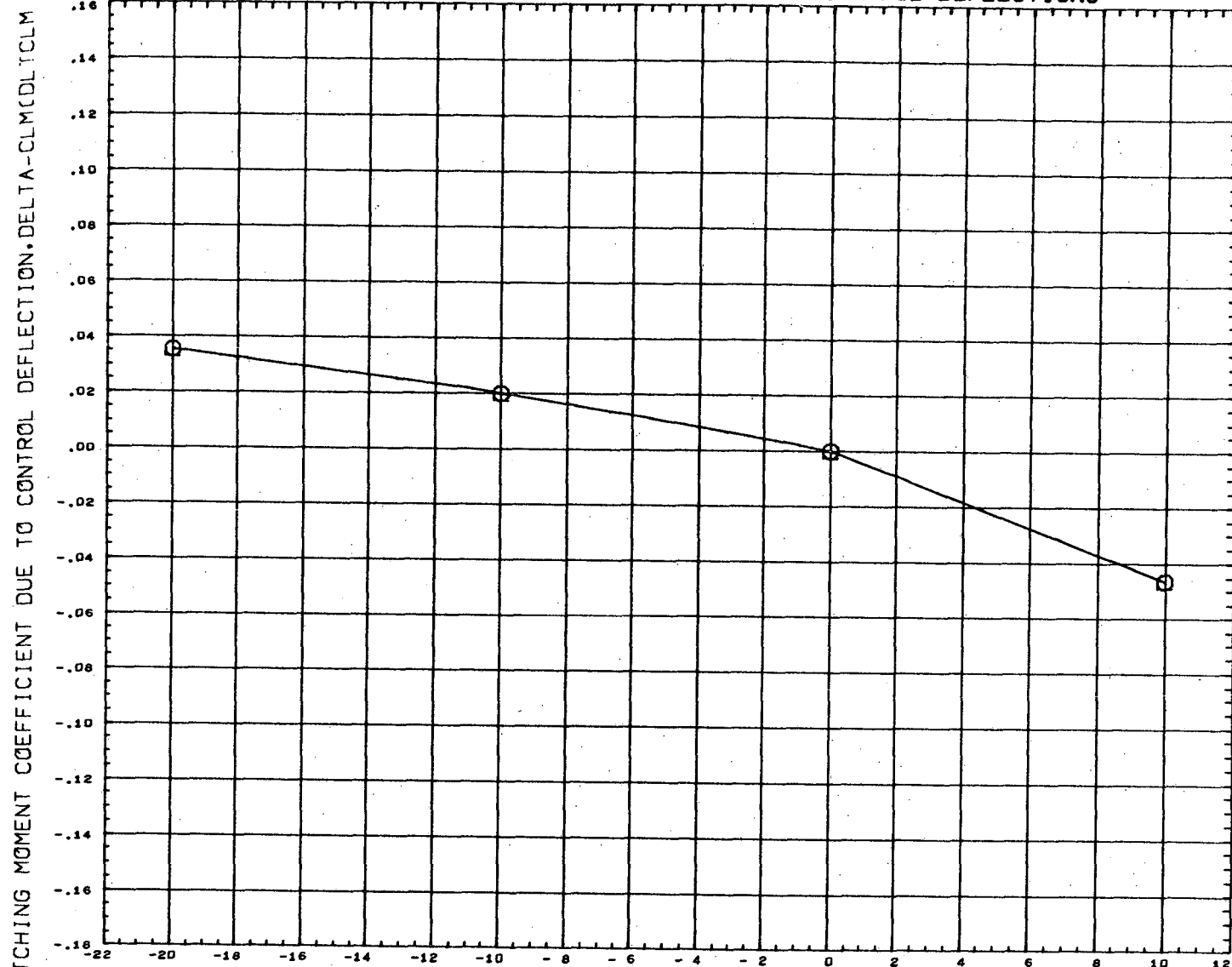


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
Q	20.000	MACH	3.000	BETA	0.000	DATASET	DLTELV	DATASET	DLTELV	SREF	14.9040	SQ. IN.
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120	IN.
						S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.
										XMRF	7.2990	IN.
										YMRF	0.0000	IN.
										ZMRF	0.0000	IN.
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DATA HIST. CODE I*C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



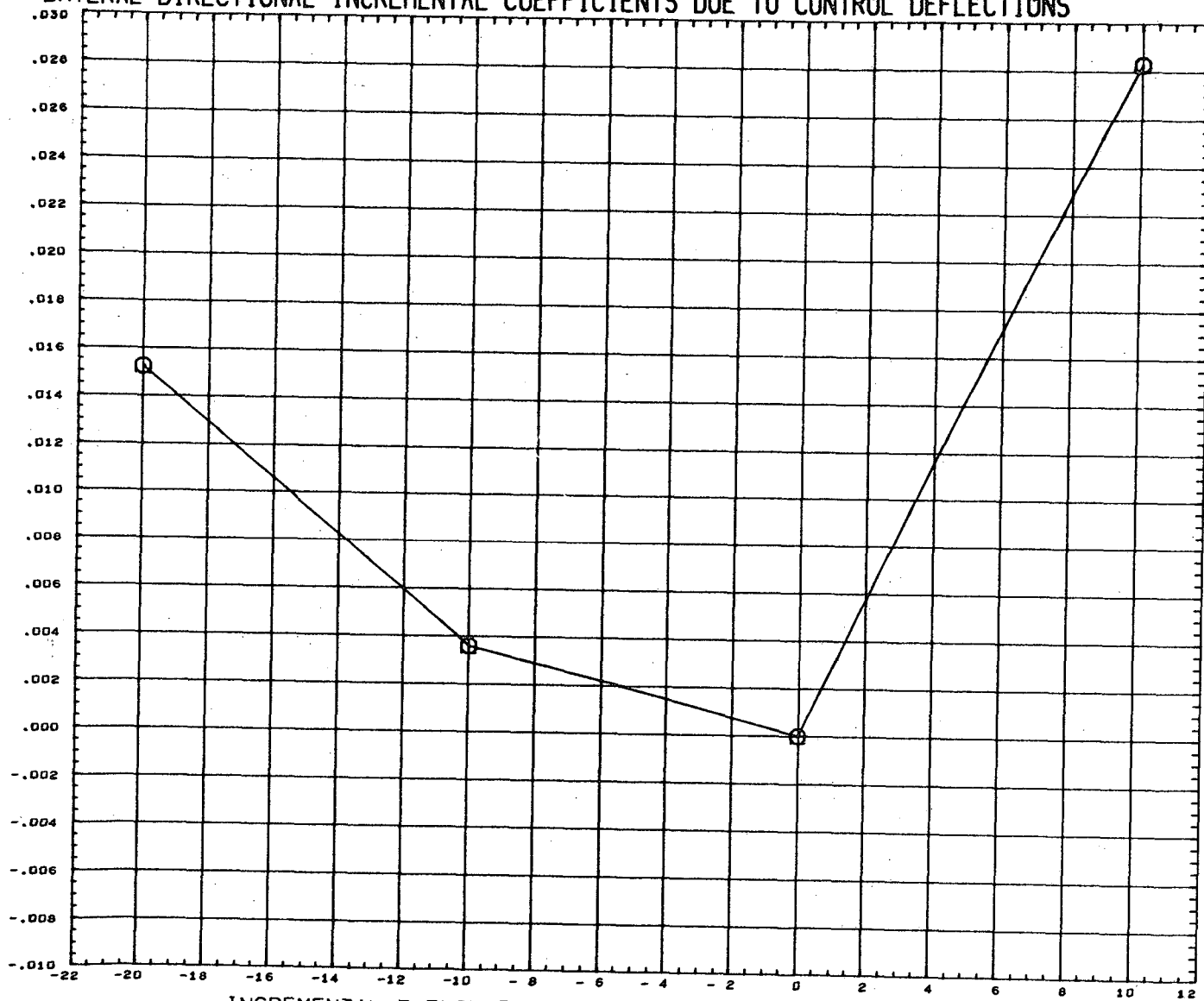
INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	23.000	MACH 3.000 BETA 0.000	DATASET DLTELV DATASET DLTELV	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	S35EAB - 20.000 S35EAC - 10.000	LREF 3.0120 IN.
			S35EAO 0.000 S35EAA 10.000	BREF 6.0180 IN.
				XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE 1* C

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTEL V) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	5.000	MACH 0.900 BETA 0.000	DATA SET DLTEL V	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	S35EAB - 20.000 S35EAC - 10.000	LREF 3.0120 IN.
			S35EAO 0.000 S35EAA 10.000	BREF 6.0180 IN.
				XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I* C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



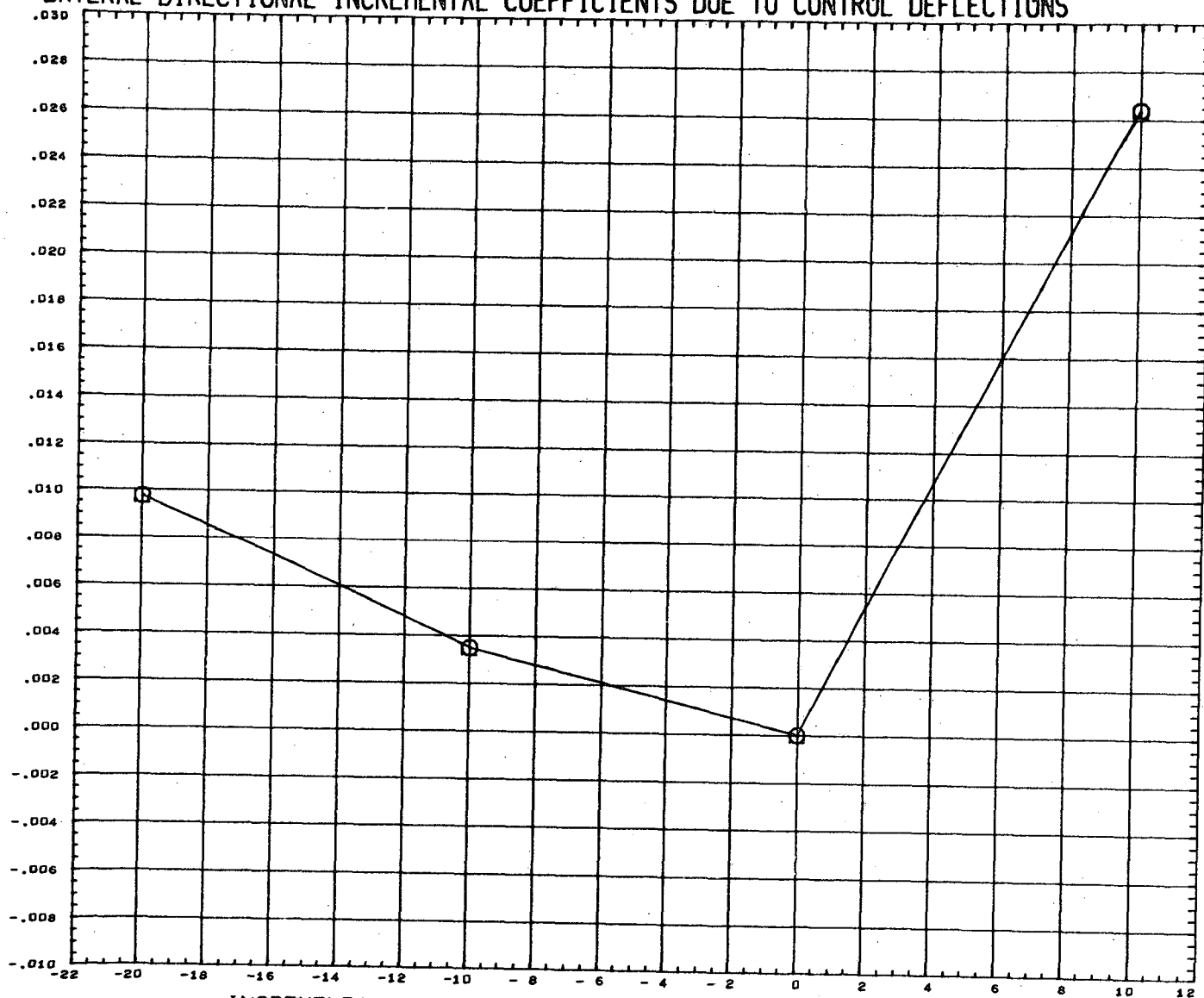
INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTEL V) DEGREES

SECTION SELECTION: DELTA-SECTION (DELTV) DEGREES												
SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
Q	10.000	<u>MACH</u>	0.900	BETA	0.000	DATASET	DLTEL V	DATASET	DLTEL V	SREF	14.9040	SQ. IN.
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120	IN.
						S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.
										XMRP	7.2990	IN.
										YMRP	0.0000	IN.
										ZMRP	0.0000	IN.
										SCALE	0.0035	
		DATA HIST. CODE	I*C									

DATA HIST. CODE I* C

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

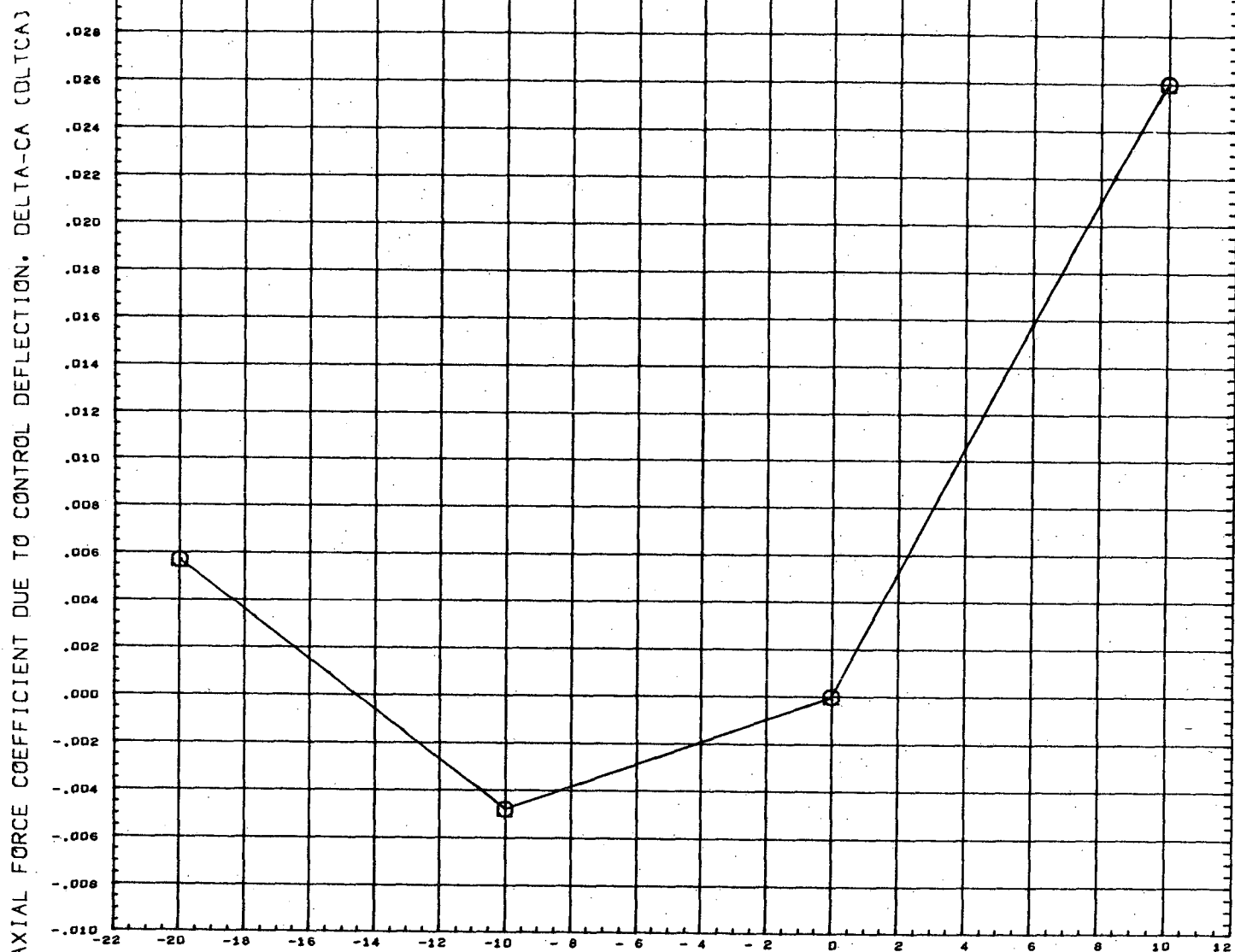


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTEL) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
		MACH	BETA	DATA SET	DLTEL	DATA SET	DLTEL	SREF		SQ. IN.		
○	15.000	CANARD	0.000	S35EAB	-20.000	S35EAC	-10.000	LREF	14.9040	IN.		
			0.000	S35EAO	0.000	S35EAA	10.000	BREF	3.0120	IN.		
								XMRP	6.0180	IN.		
								YMRP	7.2990	IN.		
								ZMRP	0.0000	IN.		
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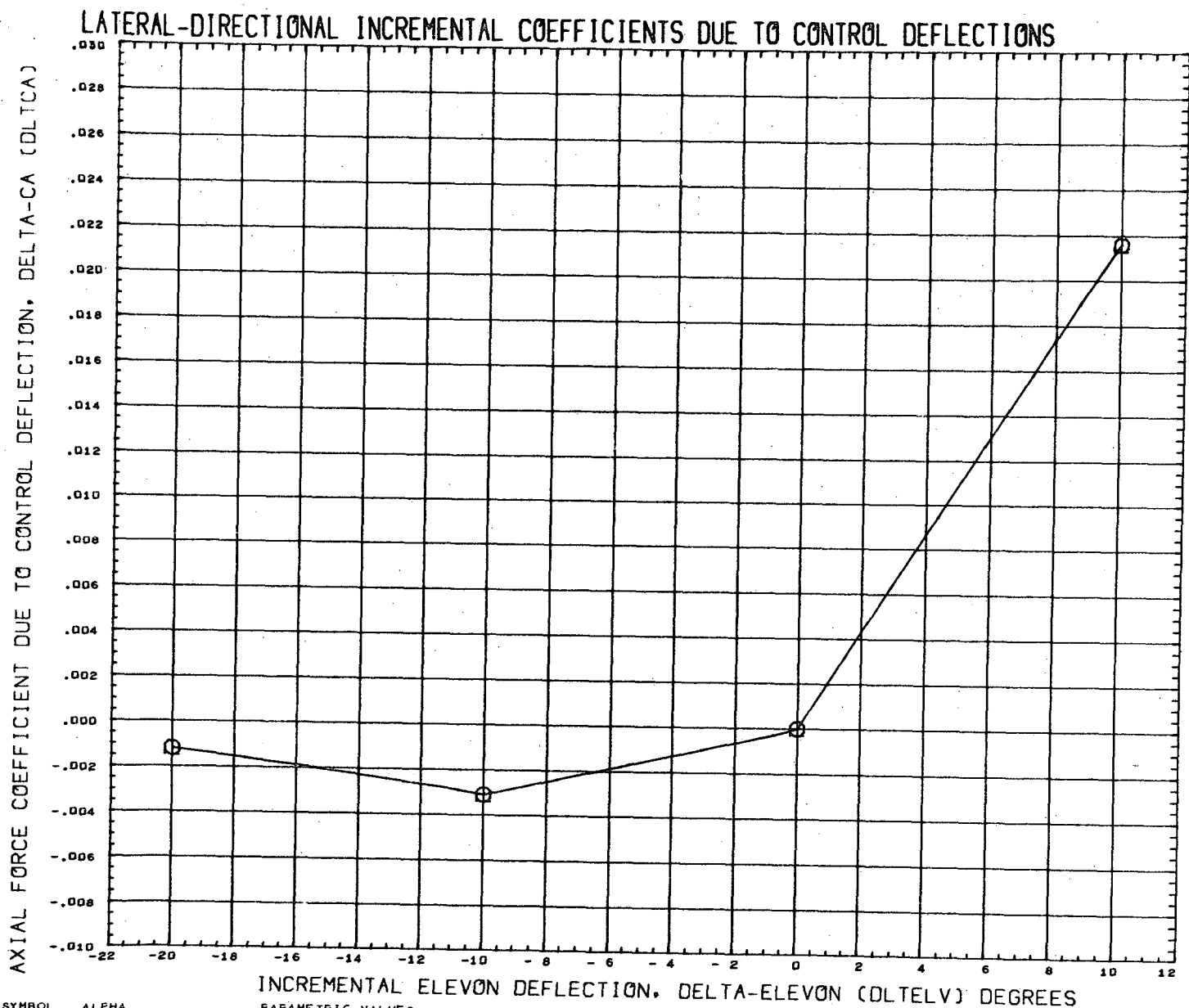
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LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



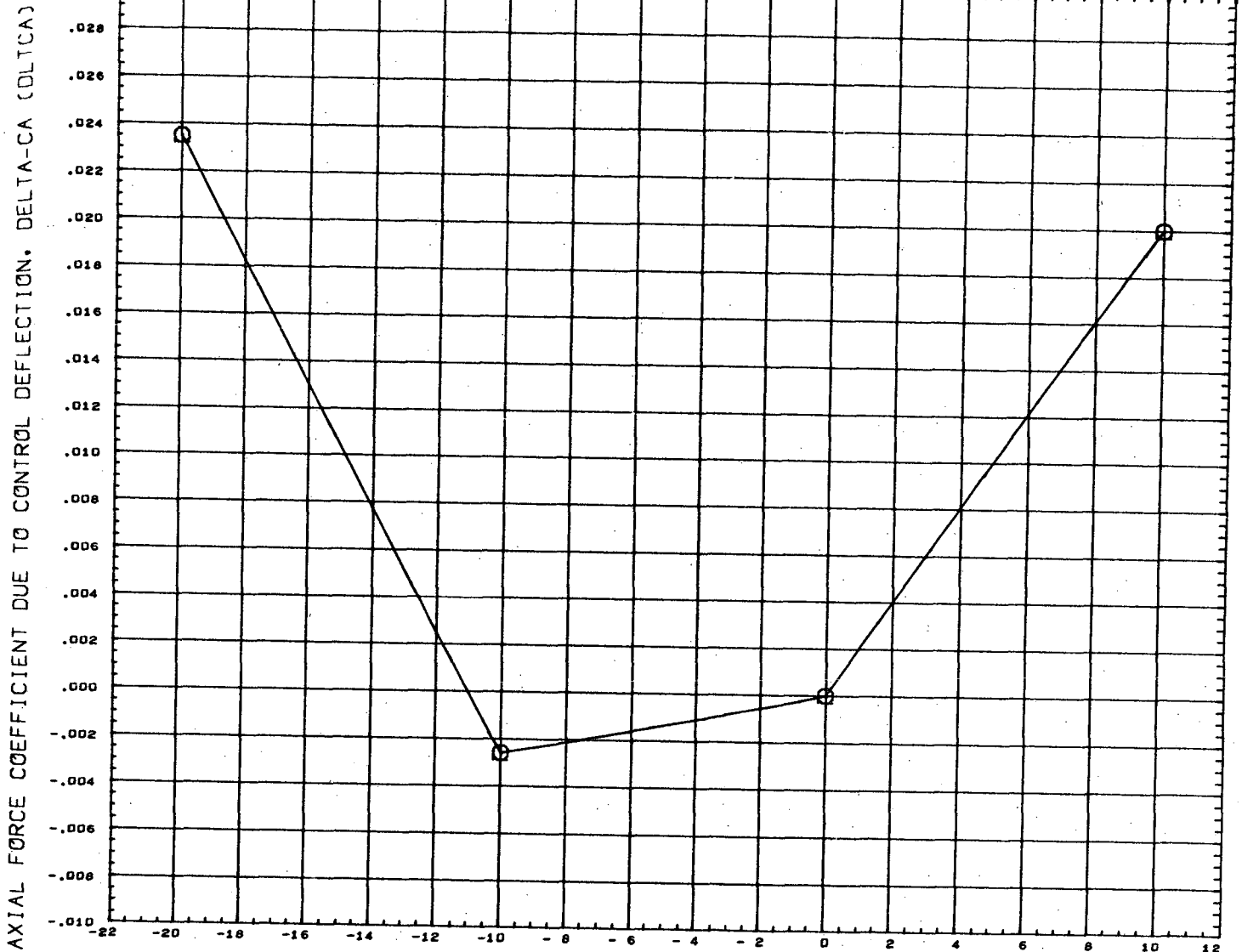
INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES									
SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
Q	20.000	MACH	0.900	BETA	0.000	DATASET	DLTELV	DATASET	DLTELV
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000
						S35EAO	0.000	S35EAA	10.000
								SREF	14.9040
								LREF	3.0120
								BREF	6.0180
								XMRP	7.2990
								YMRP	0.0000
								ZMRP	0.0000
								SCALE	0.0035

DATA HIST. CODE I*C



PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
SYMBOL	ALPHA	DATA SET	DLTELV	SREF	SQ. IN.
Q	23.000	S35EAB	-20.000	LREF	3.0120
	MACH	S35EAC	-10.000	BREF	6.0180
	CANARD	S35EAA	10.000	XMRP	7.2990
	BETA			YMRP	0.0000
	RUDDER			ZMRP	0.0000
				SCALE	0.0035

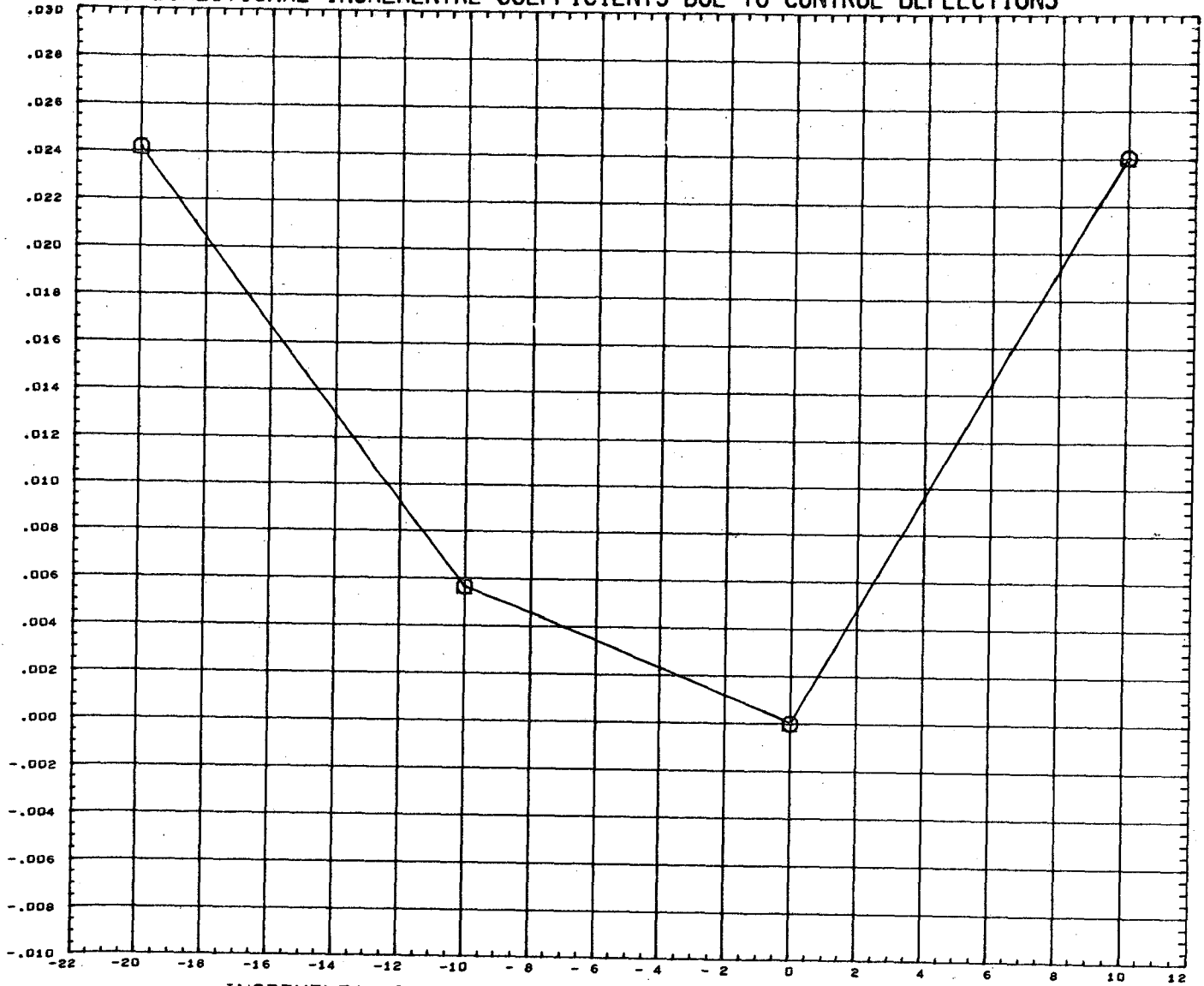
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



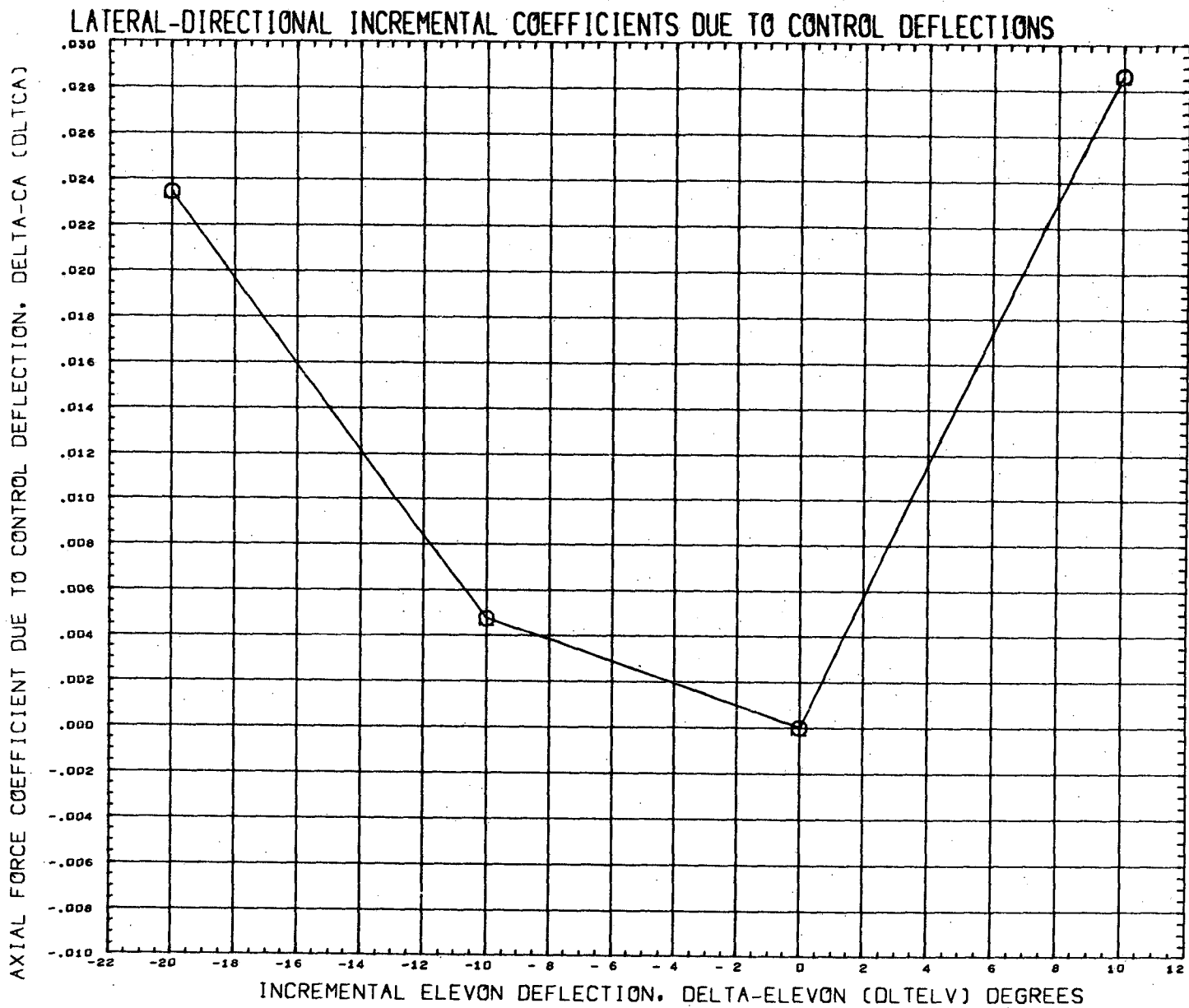
SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	5.000	MACH 1.000 BETA 0.000	DATA SET DLTEL V	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	S35EAB - 20.000 S35EAC - 10.000	LREF 3.0120 IN.
			S35EAO 0.000 S35EAA 10.000	BREF 6.0180 IN.
				XMRF 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE 1=C

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)



M-493GD/C B25W19C8V10,ELEVON INCREMENTS(EA0-EA0) (S35EAB) 22 SEP 71 PAGE 385

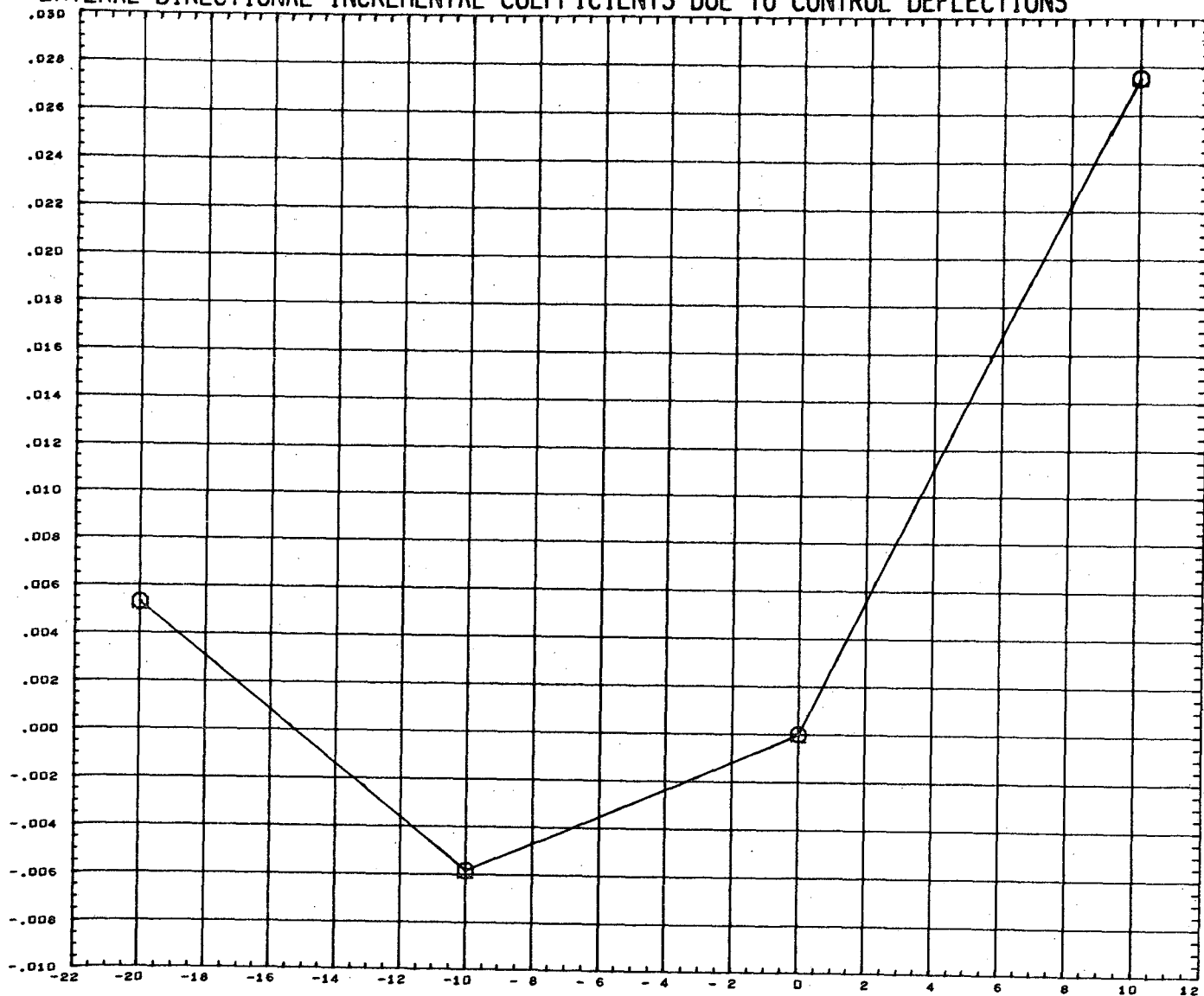


SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	15.000	MACH 1.000 BETA 0.000	DATASET DLTELV DATASET DLTELV	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	S35EAB - 20.000 S35EAC - 10.000	LREF 3.0120 IN.
			S35EAO 0.000 S35EAA 10.000	BREF 6.0180 IN.
				XMRP 7.2390 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I*C

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

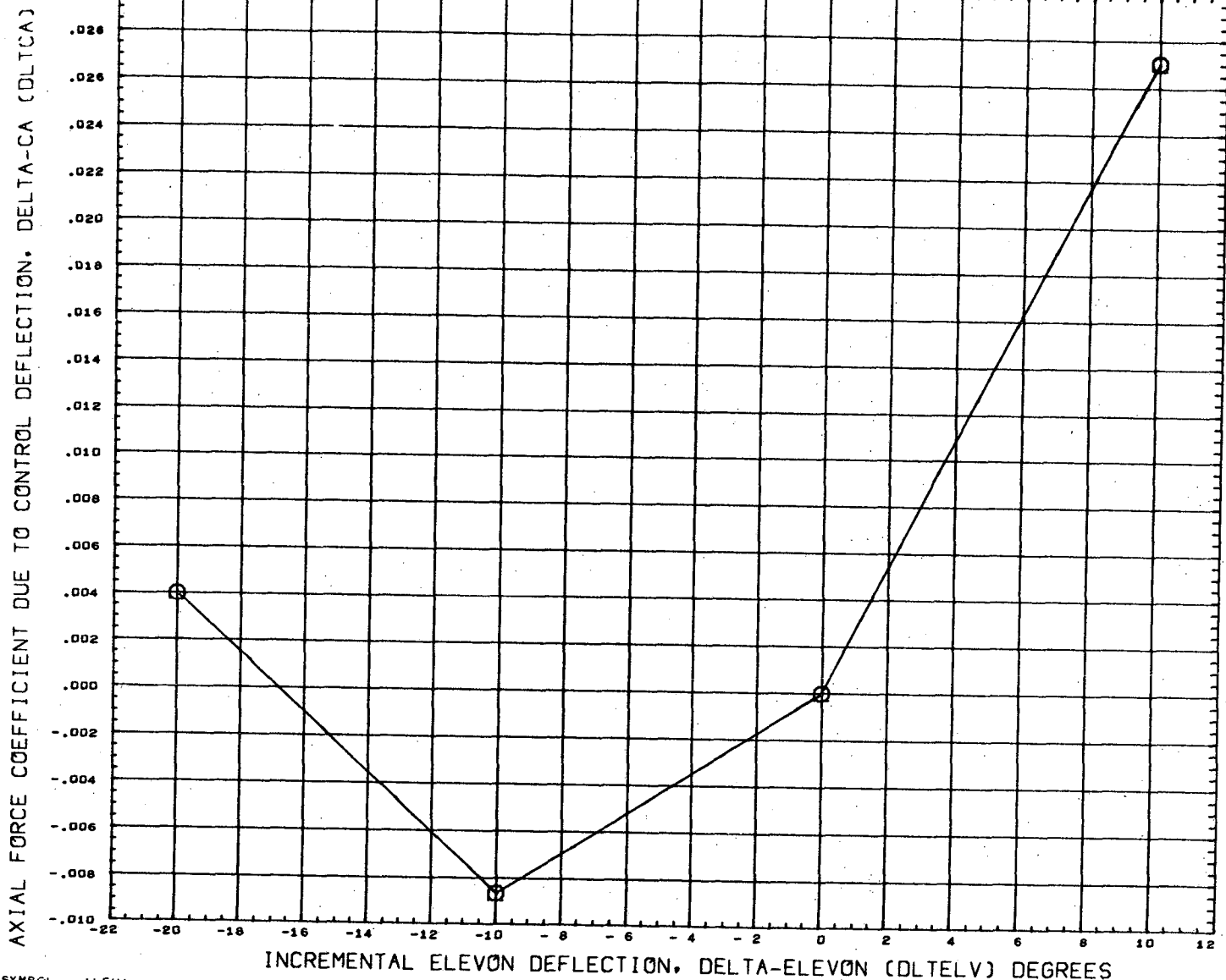


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTEL V) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	20.000	1.000 BETA 0.000	DATA SET DLTEL V	SREF 14.9040 SQ. IN.
		0.000 RUDDER 0.000	DATA SET DLTEL V	LREF 3.0120 IN.
			S35EAB - 20.000	BREF 6.0180 IN.
			S35EAO 0.000	XMRP 7.2990 IN.
			S35EAC - 10.000	YMRP 0.0000 IN.
			S35EAA 10.000	ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I* C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

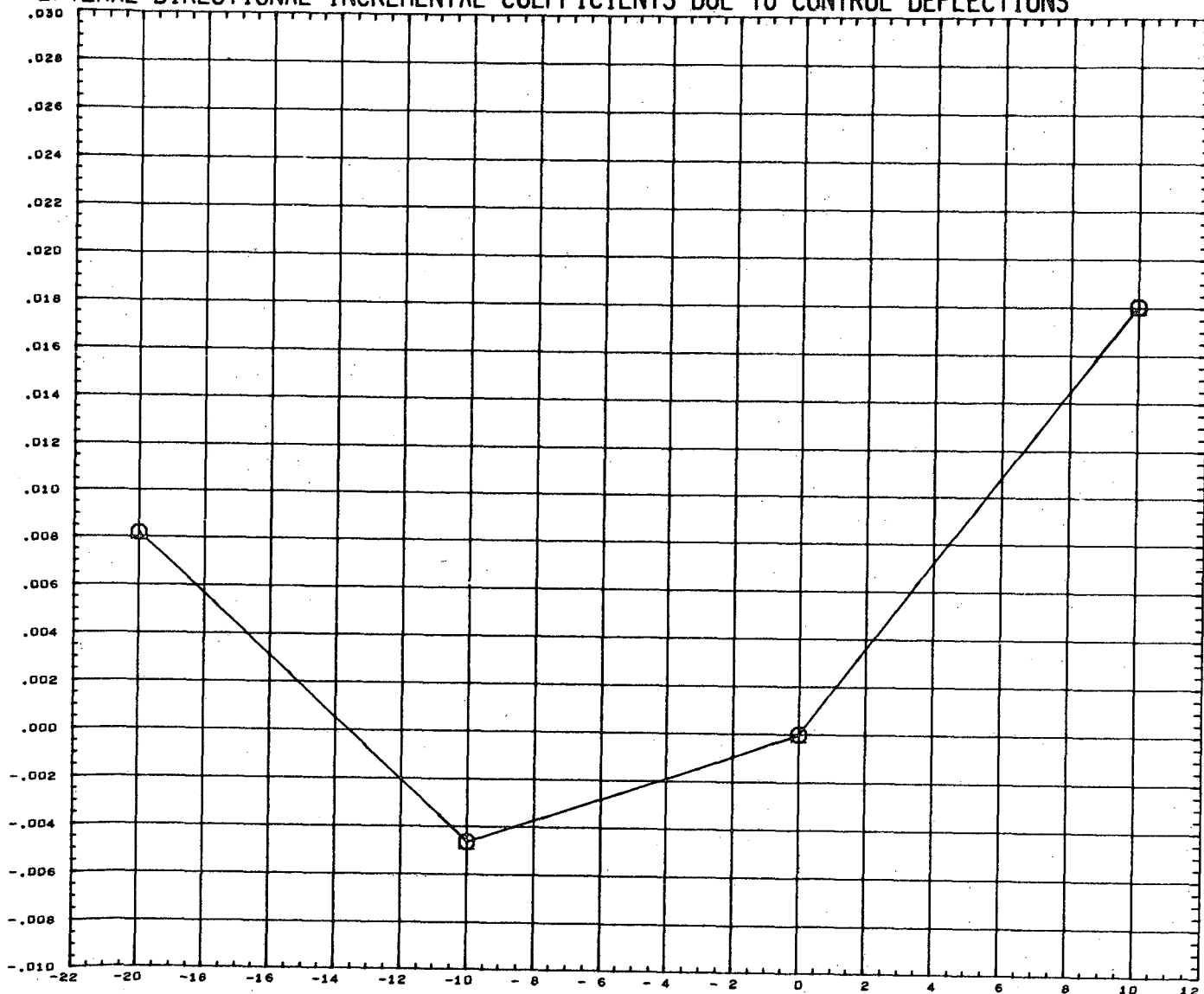


SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
Q	23.000	MACH	1.000	BETA	0.000	DATASET	DLTEL V	DATASET	DLTEL V	SREF	14.9040	50. IN.	
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120	IN.	
						S35EAC	0.000	S35EAA	10.000	BREF	6.0180	IN.	
										XMRF	7.2990	IN.	
										YMRF	0.0000	IN.	
										ZMRF	0.0000	IN.	
										SCALE	0.0035		

DATA HIST. CODE I#C

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



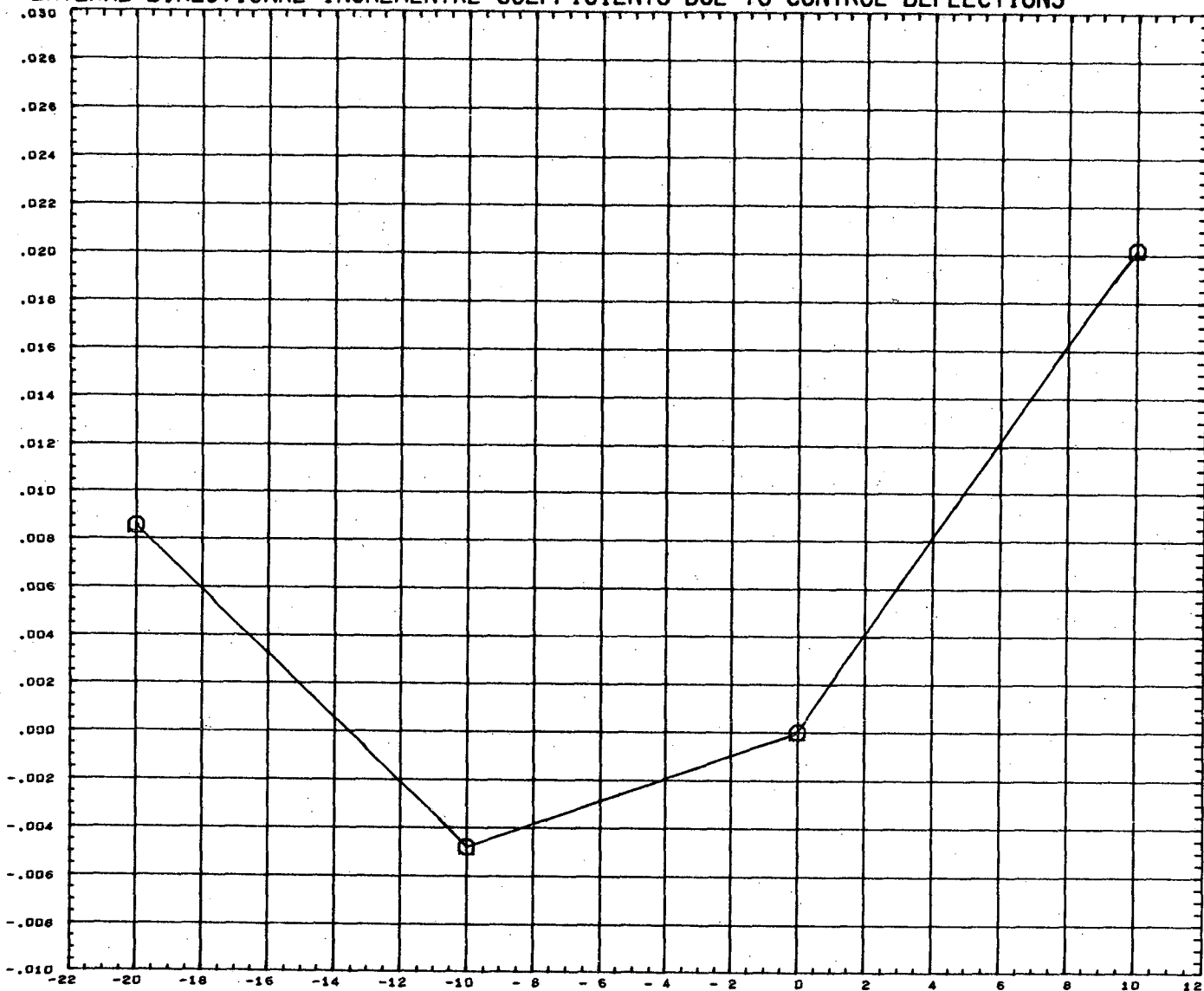
INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTEL) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
D	5.000	MACH 1.200 BETA 0.000	DATA SOURCE	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	DLTELV	LREF 3.0120 IN.
			DLTELV	BREF 6.0180 IN.
			DLTELV	YMRP 7.2990 IN.
			DLTELV	ZMRP 0.0000 IN.
			DLTELV	SCALE 0.0035

DATA HIST. CODE I&C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)



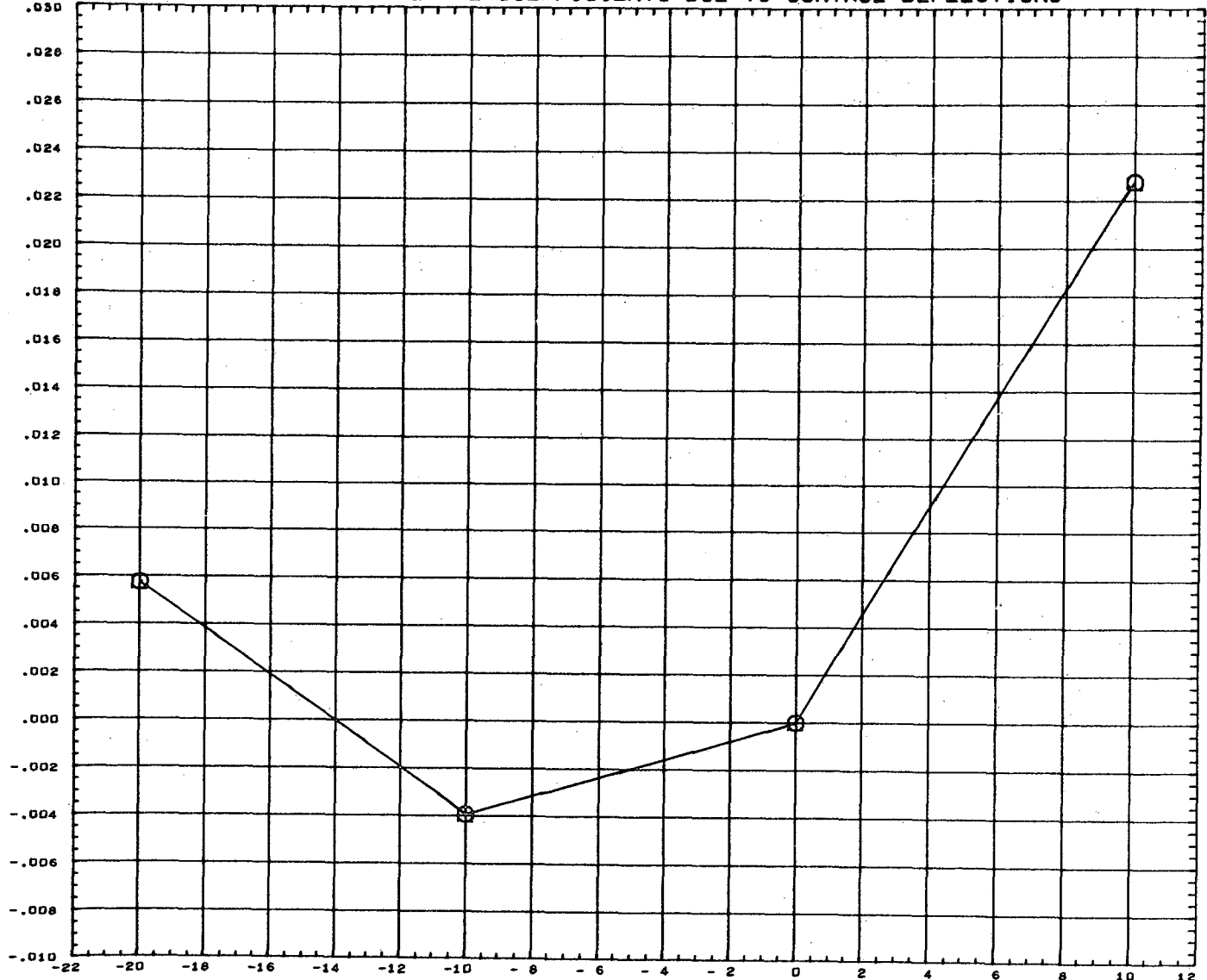
INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
D	10.000	1.200 BETA	0.000 DATASET	SREF 14.9040 50. IN.
		0.000 RUDDER	0.000 S35EAB - 20.000	LREF 3.0120 IN.
			0.000 S35EAC - 10.000	BREF 6.0180 IN.
			0.000 S35EAO	XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I*C

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

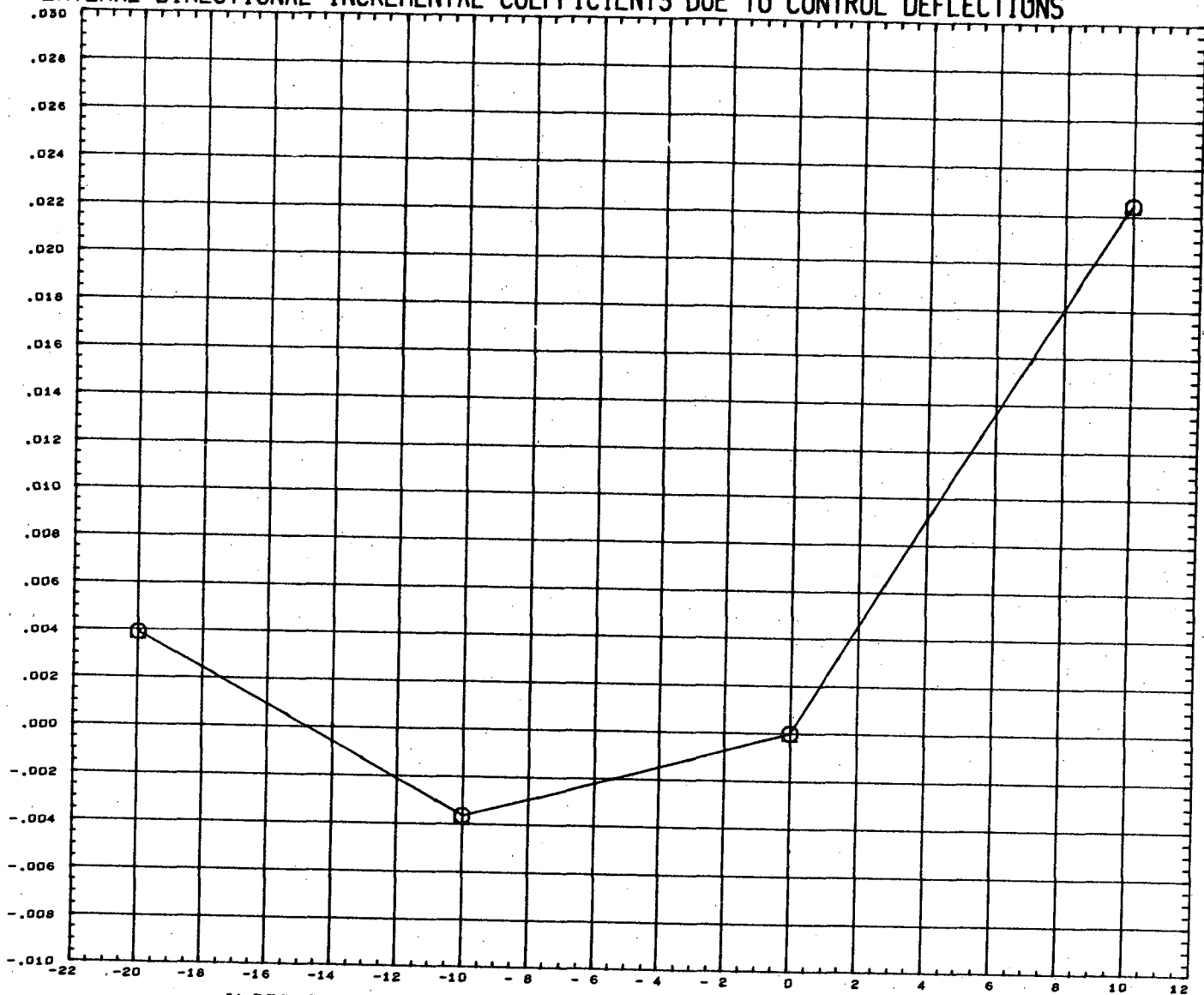


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTEL V) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
		MACH	BETA	0.000	DATASET	DLTEL V	DATASET	DLTEL V	SREF	14.9040	50. IN.	
D	15.000	CANARD	0.000	RUDDER	0.000	S35EAB - 20.000	S35EAC - 10.000	S35EAA 10.000	LREF	3.0120	IN.	
						S35EAO 0.000			BREF	6.0180	IN.	
									XMRP	7.2990	IN.	
									YMRP	0.0000	IN.	
									ZMRP	0.0000	IN.	
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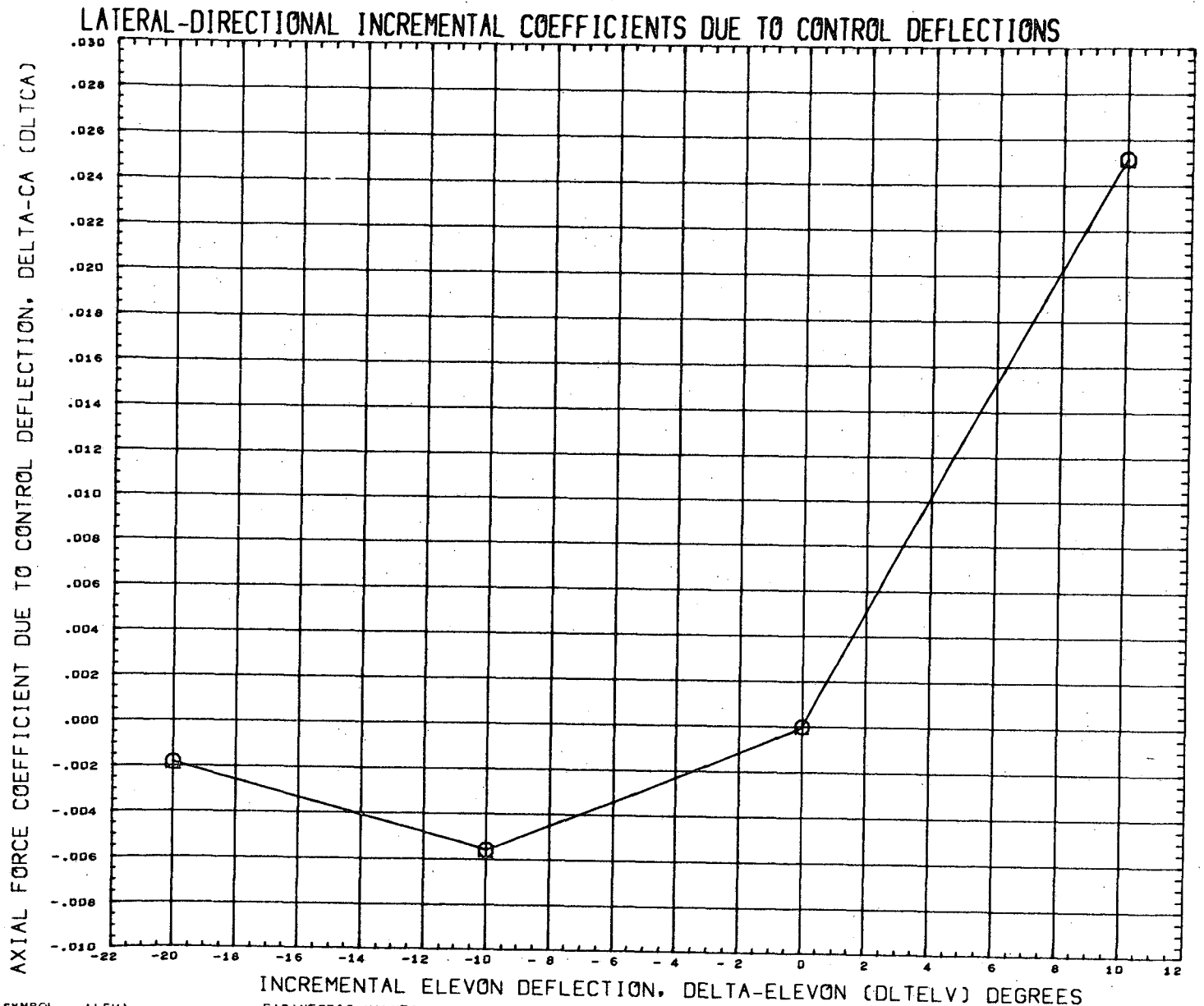
DATA HIST. CODE I*C

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)



INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

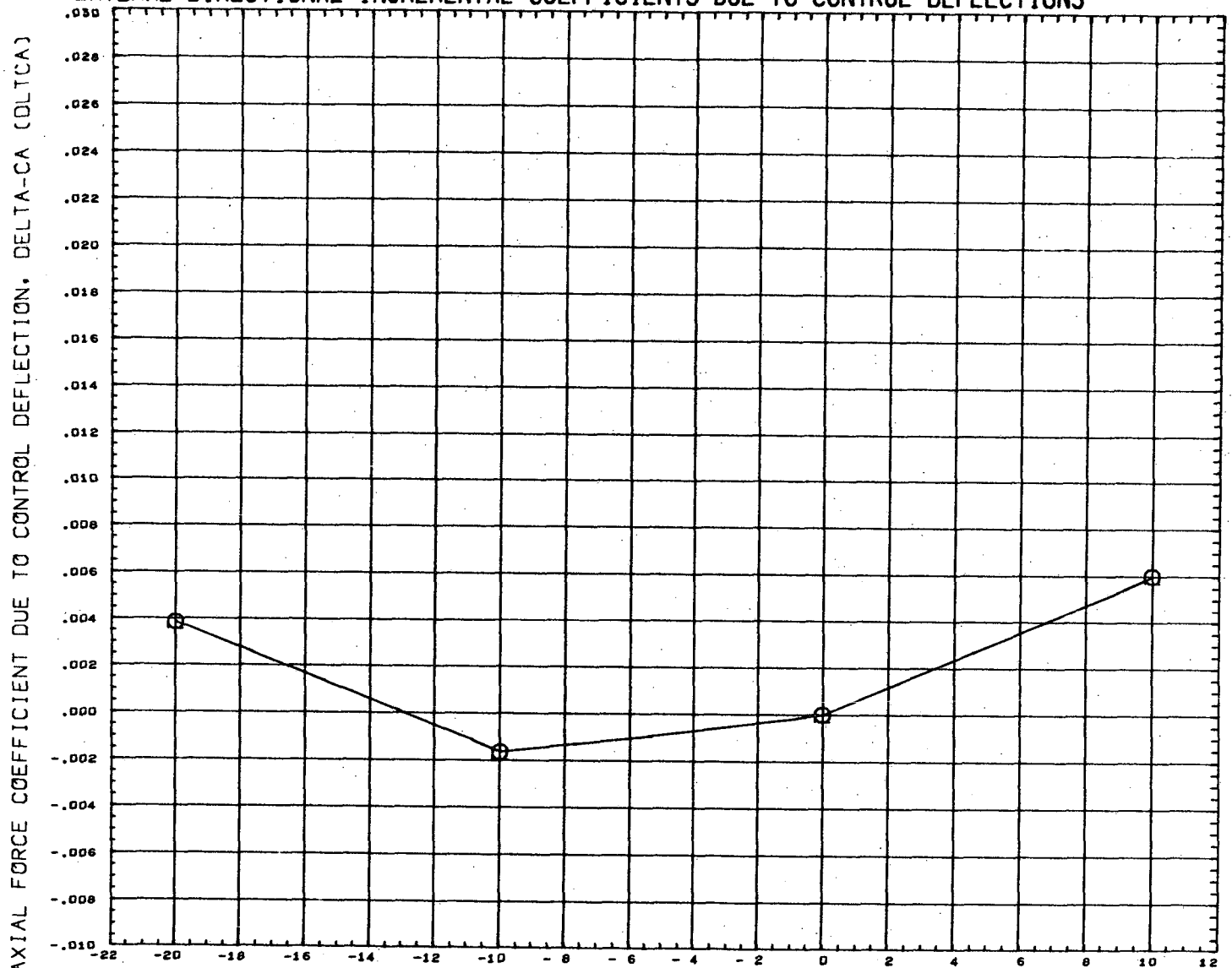
EXPERIMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES											
SYMBOL □	ALPHA 20.000	PARAMETRIC VALUES			DATA SOURCE				REFERENCE INFORMATION		
		<u>MACH</u> 1.200	BETA 0.000	0.000	DATASET DLTELV	DATASET DLTELV	DATASET DLTELV	SREF	14.9040	SQ.IN.	
		CANARD	0.000	RUDDER	0.000	S35EAB - 20.000	S35EAC - 10.000	S35EAA 10.000	LREF	3.0120	IN.
									BREF	6.0180	IN.
									XMRP	7.2990	IN.
									YMRP	0.0000	IN.
									ZMRP	0.0000	IN.
									SCALE	0.0035	
		DATA HIST. CODE	I#C								



SYMBOL O	ALPHA	PARAMETRIC VALUES		DATA SOURCE				REFERENCE INFORMATION				
	23.000	MACH	1.200	BETA	0.000	DATASET	DLTEL V	DATASET	DLTEL V	SREF	14.9040	SQ. IN.
	CANARD		0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120	IN.
						S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.
										XMRF	7.2990	IN.
										YMRP	0.0000	IN.
										ZMRP	0.0000	IN.
										SCALE	0.0035	

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

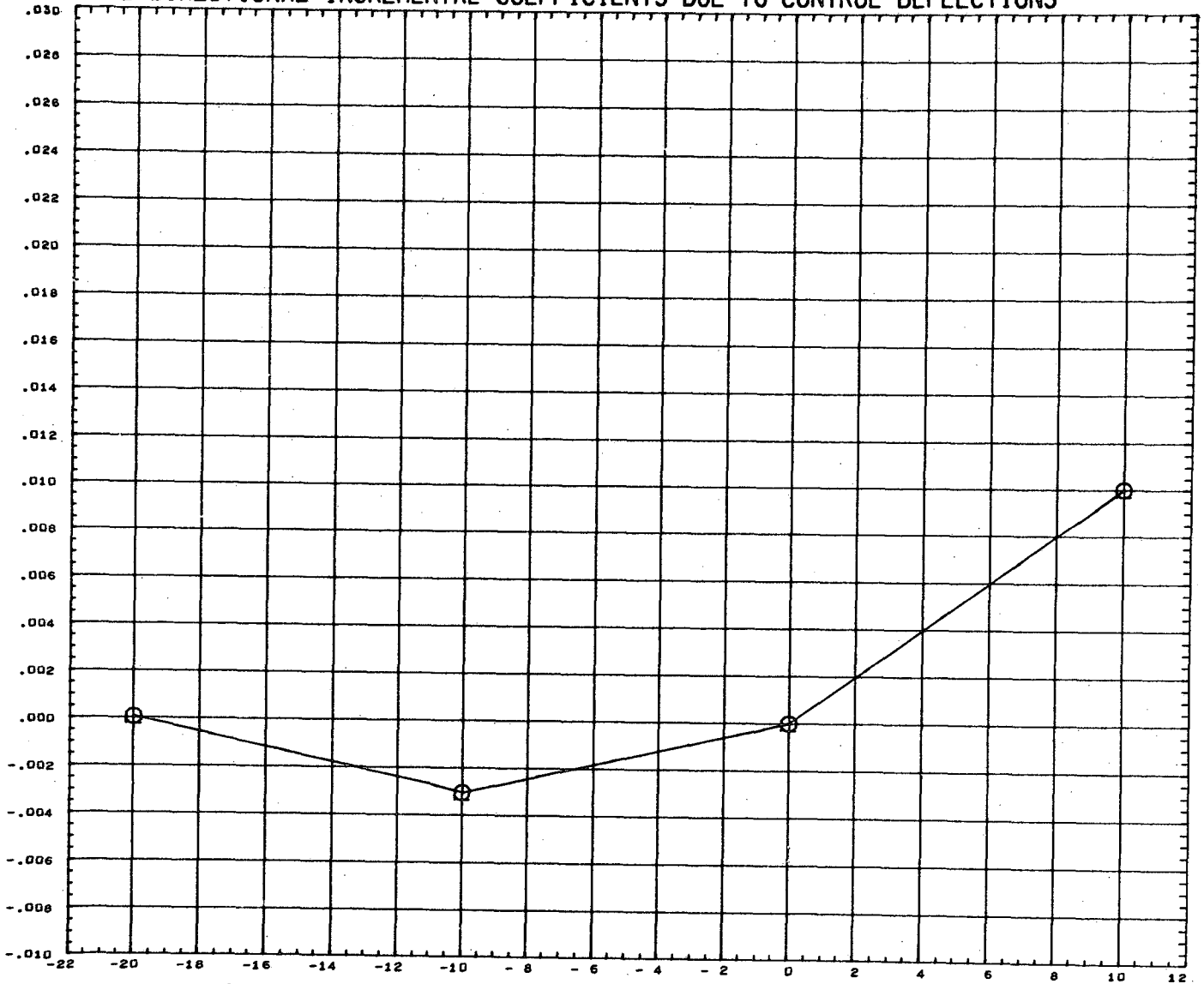


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES									
SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
○	5.000	MACH	2.000	BETA	0.000	DATASET	DLTELV	DATASET	DLTELV
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000
						S35EAO	0.000	S35EAA	10.000
								SREF	14.9040
								LREF	3.0120
								BREF	6.0180
								XMRP	7.2990
								YMRP	0.0000
								ZMRP	0.0000
								SCALE	0.0035
									SQ. IN.

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLICA)

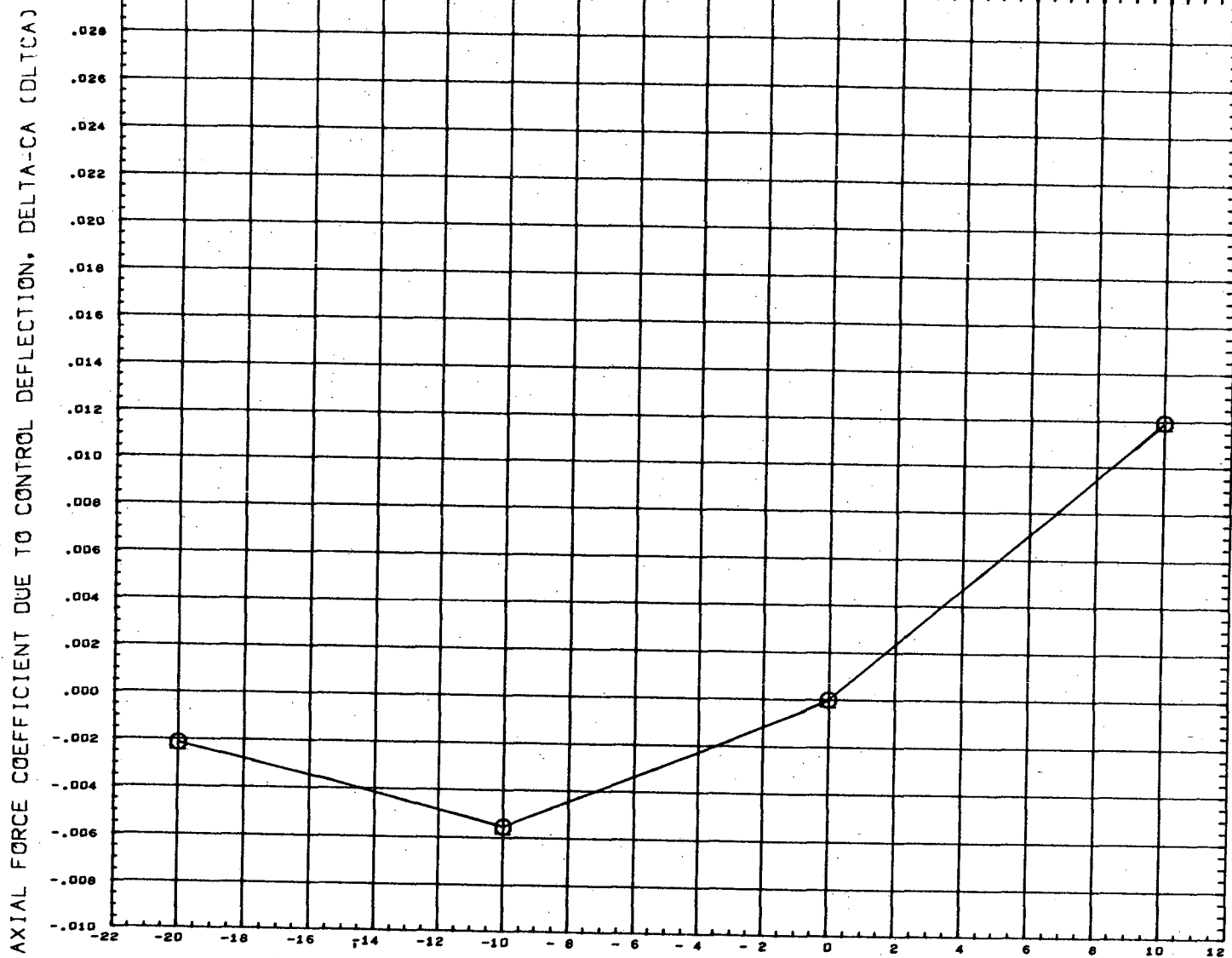


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTEL V) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	10.000	MACH 2.000 BETA 0.000	DATASET DLTEL V	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	DATASET DLTEL V	LREF 3.0120 IN.
			S35EAB - 20.000 S35EAC - 10.000	BREF 6.0180 IN.
			S35EAO 0.000 S35EAA 10.000	XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I* C

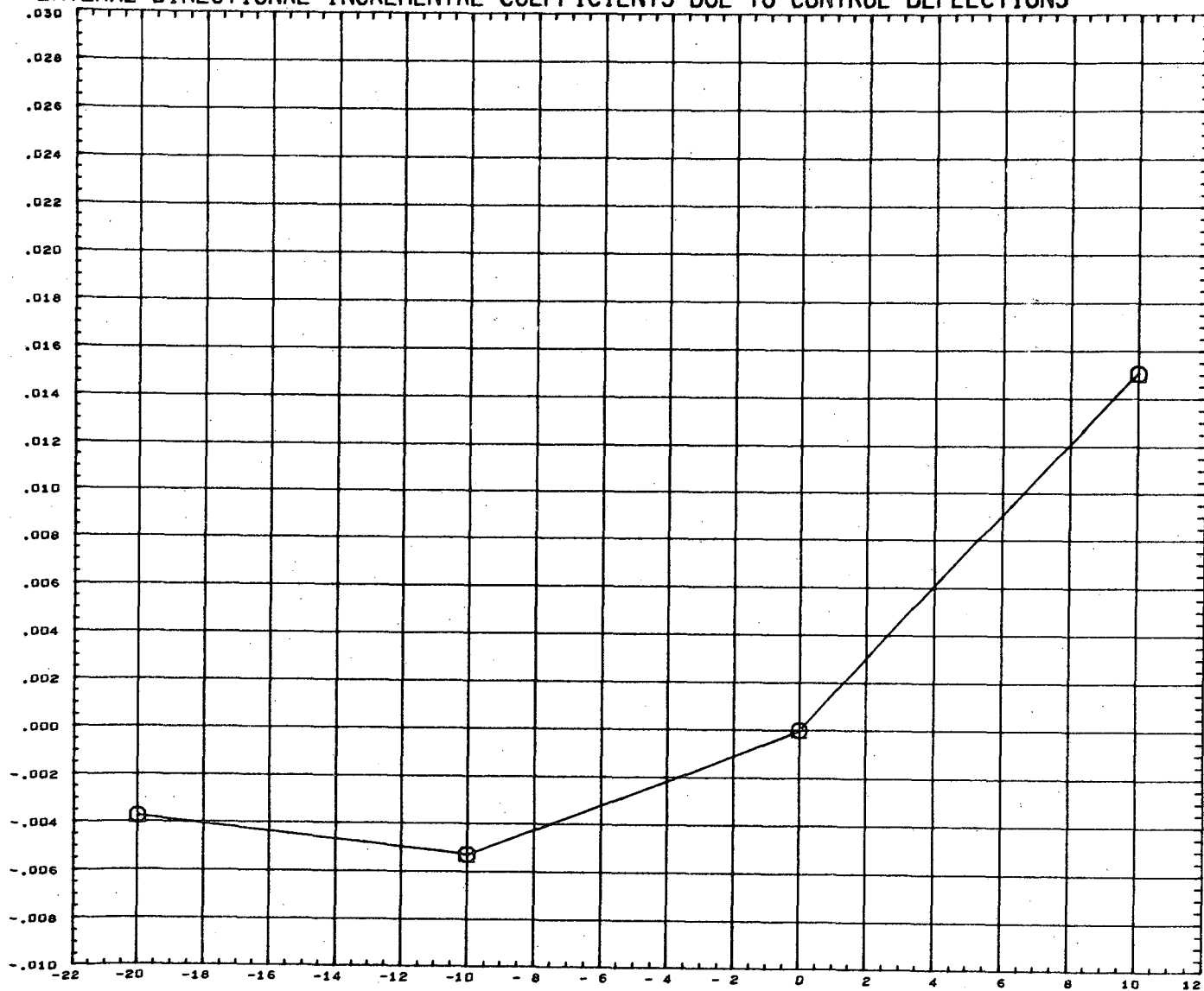
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
Q	15.000	MACH	2.000	BETA	0.000	DLTEL	14.9040
		CANARD	0.000	RUDDER	0.000	DLTEL	3.0120
						DLTEL	6.0180
						DLTEL	7.2990
						DLTEL	0.0000
						DLTEL	0.0000
						DLTEL	0.0035

DATA HIST. CODE I#C

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)

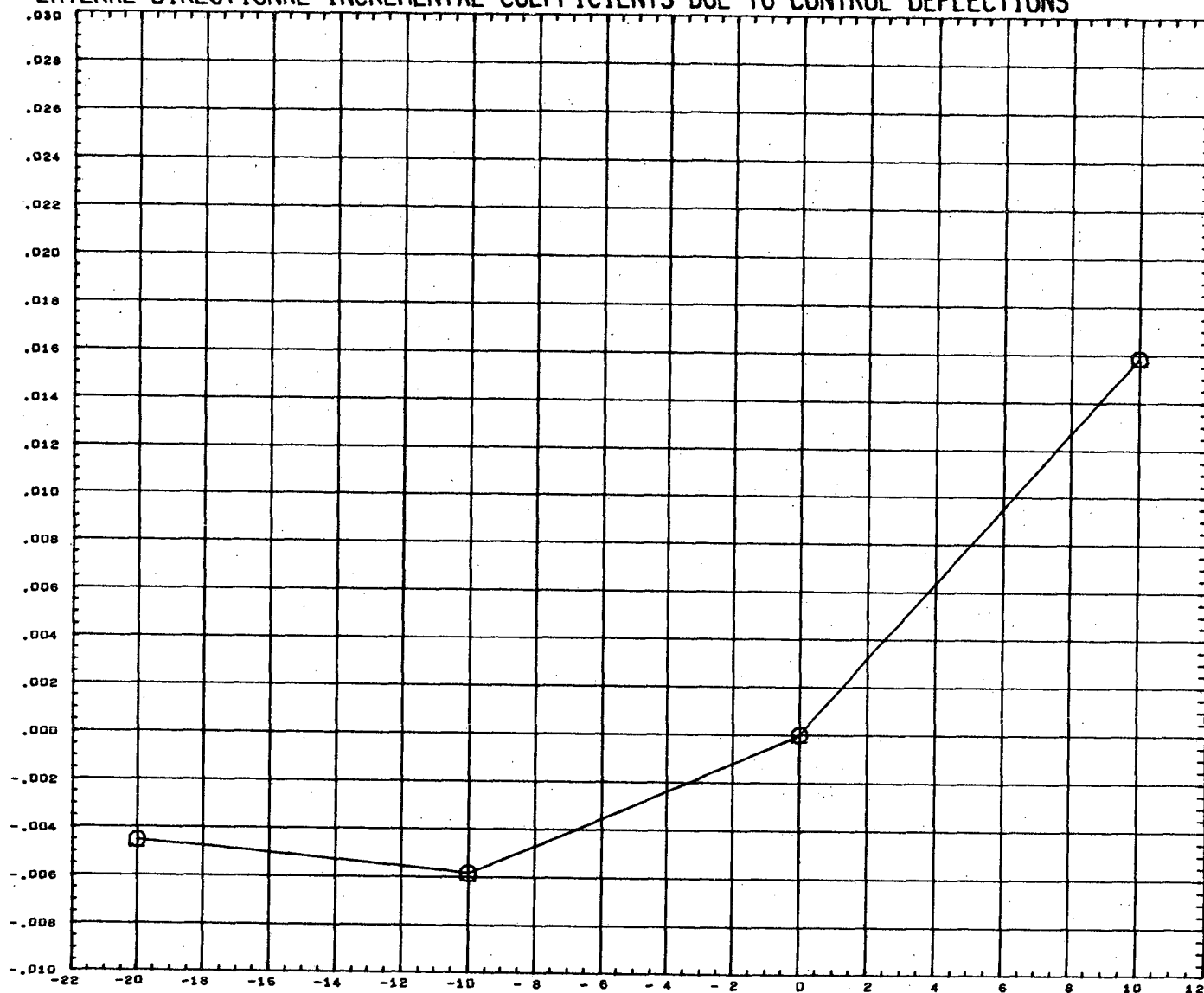


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

S Y M B O L	A L P H A	P A R A M E T R I C V A L U E S	D A T A S O U R C E	R E F E R E N C E I N F O R M A T I O N
Q	20.000	MACH 2.000 BETA 0.000 D A T A S E T D L T E L V D A T A S E T D L T E L V		SREF 14.9040 SQ. IN.
	CANARD	0.000 RUDDER 0.000 S3SEAB - 20.000 S3SEAC - 10.000 S3SEAA 10.000		LREF 3.0120 IN. BREF 6.0180 IN. XMRP 7.2990 IN. YMRP 0.0000 IN. ZMRP 0.0000 IN. SCALE 0.0035
		D A T A H I S T . C O D E I * C		

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

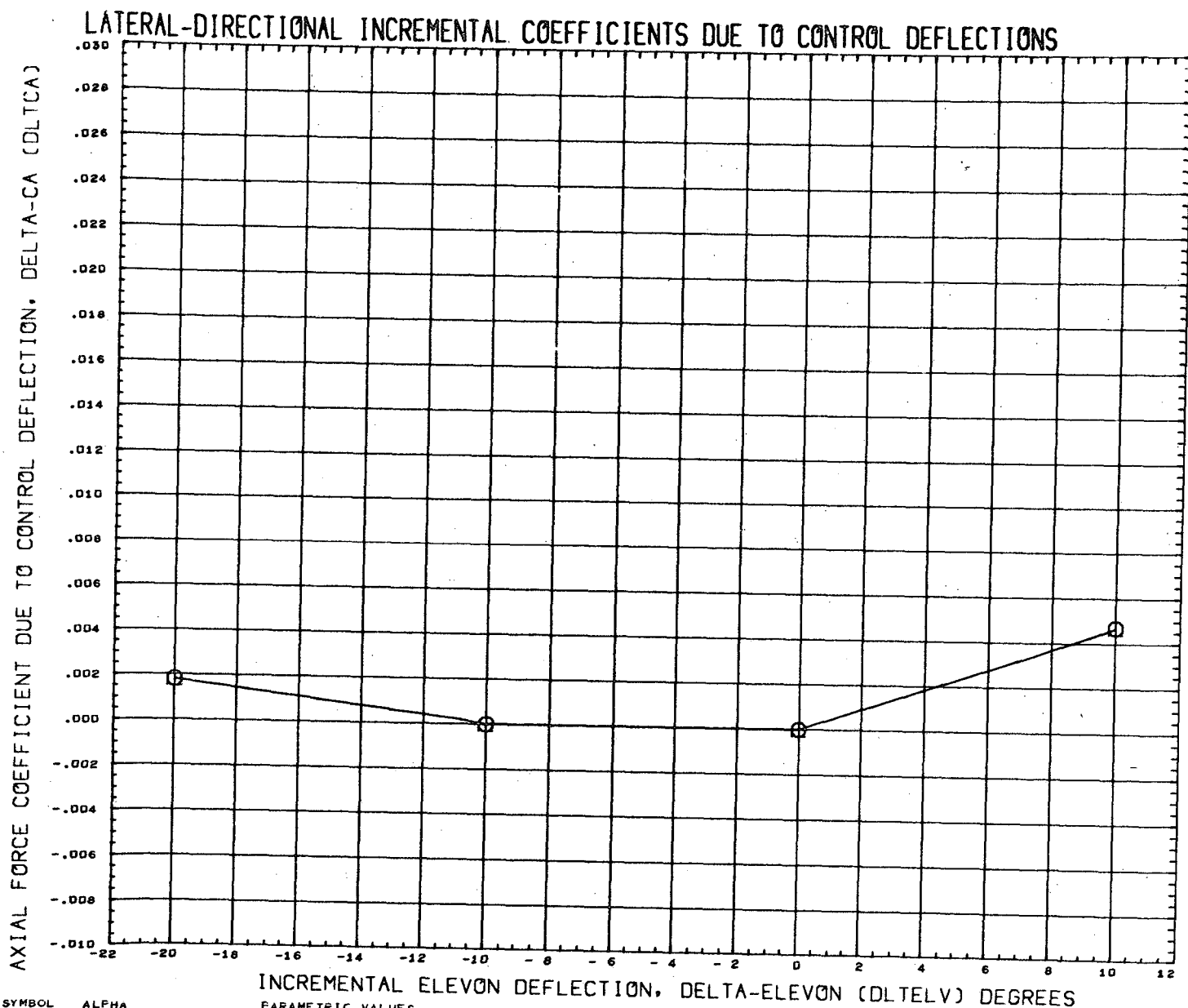
AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)



INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTELV) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	23.000	MACH 2.000 BETA 0.000	DATASET DLTELV DATASET DLTELV	SREF 14.9040 SQ. IN.
		CANARD 0.000 RUDDER 0.000	S35EAB - 20.000 S35EAC - 10.000	LREF 3.0120 IN.
			S35EAO 0.000 S35EAA 10.000	BREF 6.0180 IN.
				XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

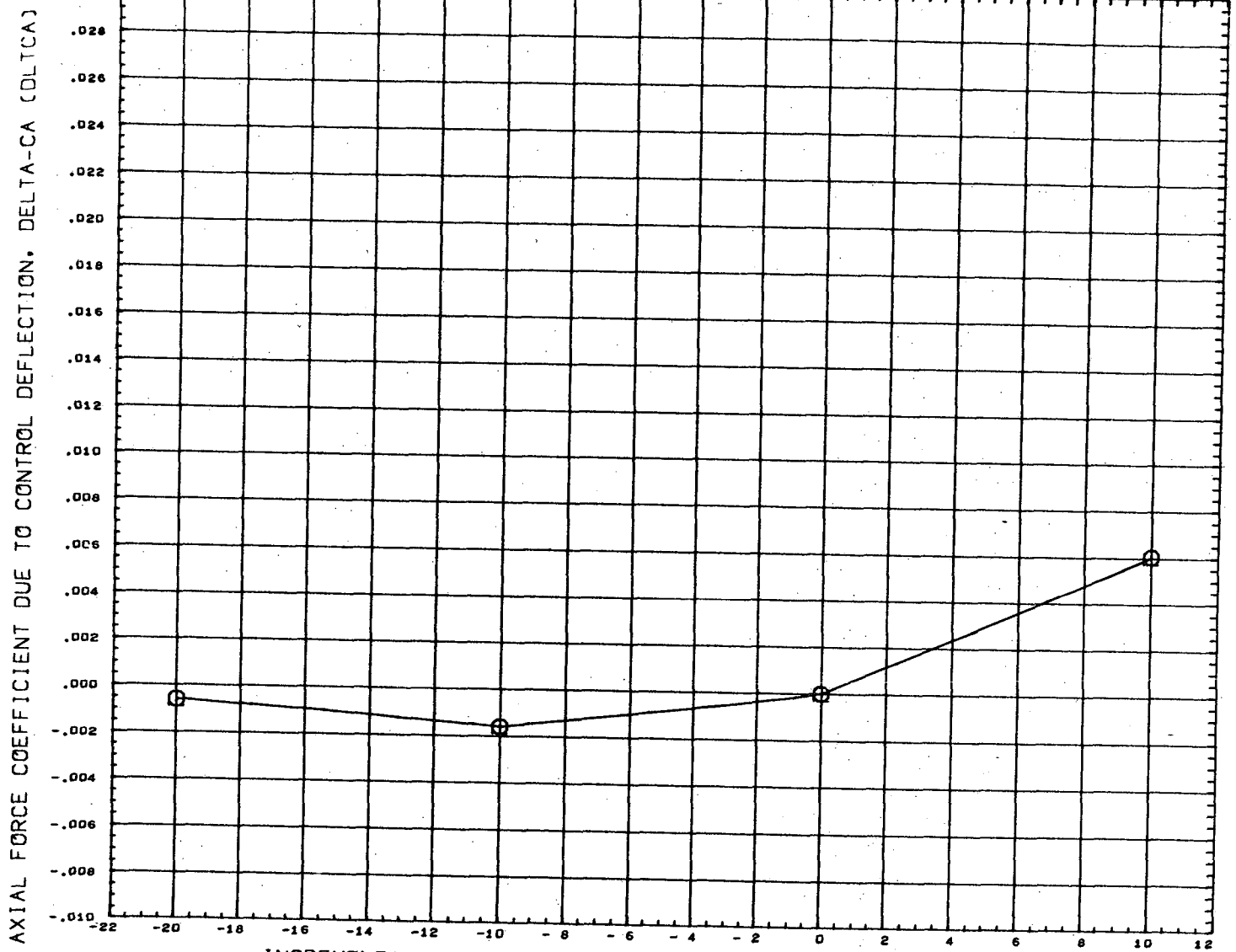
DATA HIST. CODE I*C



SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE				REFERENCE INFORMATION			
D	5.000	MACH	3.000	BETA	0.000	DATASET	DLTELV	DATASET	DLTELV	SREF	14.9040
		CANARD	0.000	RUDDER	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120
						S35EAO	0.000	S35EAA	10.000	BREF	6.0180
										XMRF	7.2990
										YMRF	0.0000
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										SCALE	0.0035

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

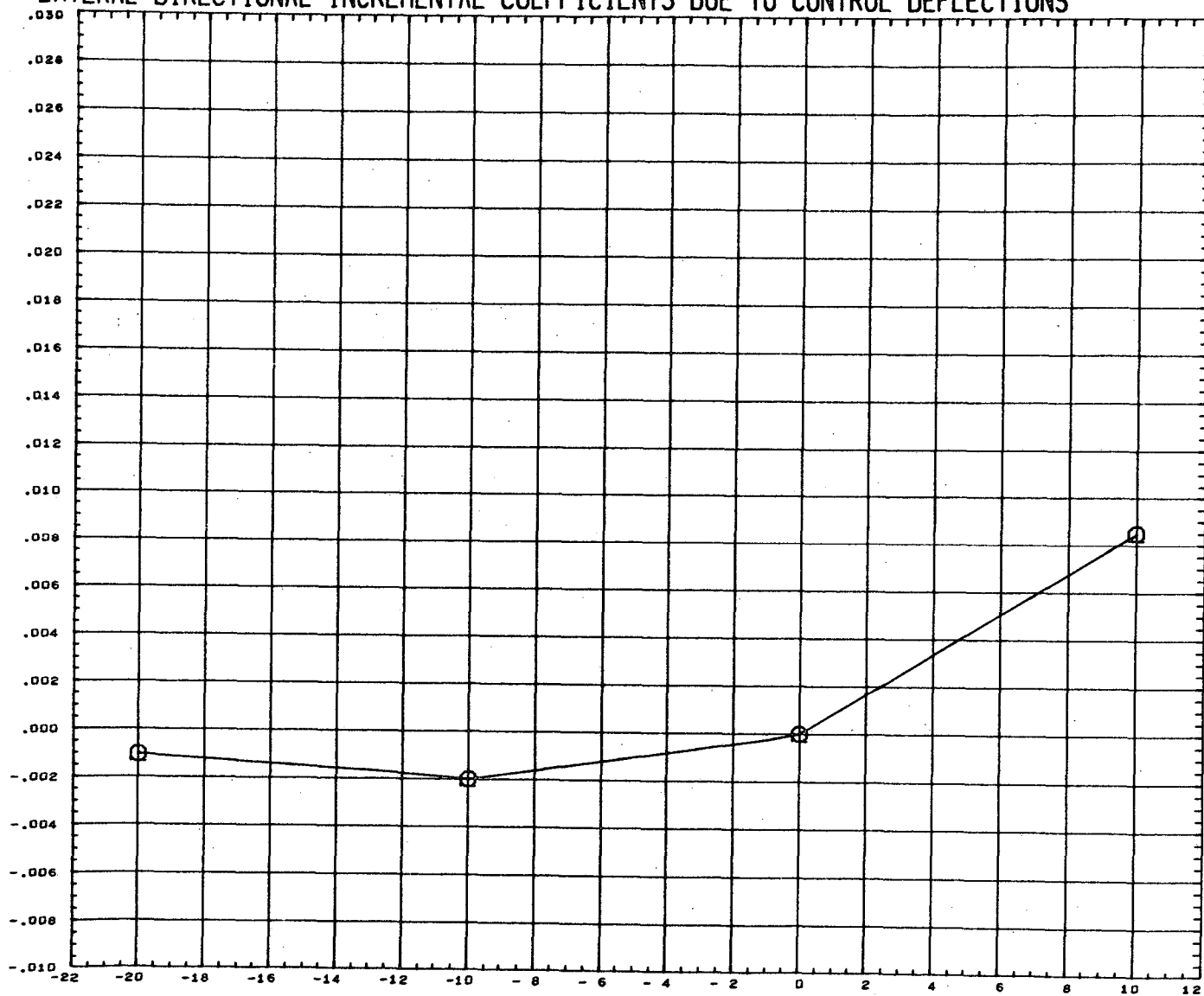


PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION		
SYMBOL	ALPHA	BETA	DLTELV	DLTELV	SREF	IN.
D	10.000	0.000	-20.000	-10.000	14.9040	90. IN.
	<u>MACH</u>	0.000	0.000	10.000	3.0120	IN.
	CANARD	RUDDER	S35EAB	S35EAC	6.0180	IN.
			S35EAO	S35EAA	7.2990	IN.
					YMRP	0.0000
					ZMRP	0.0000
					SCALE	0.0035

DATA HIST. CODE I*C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)



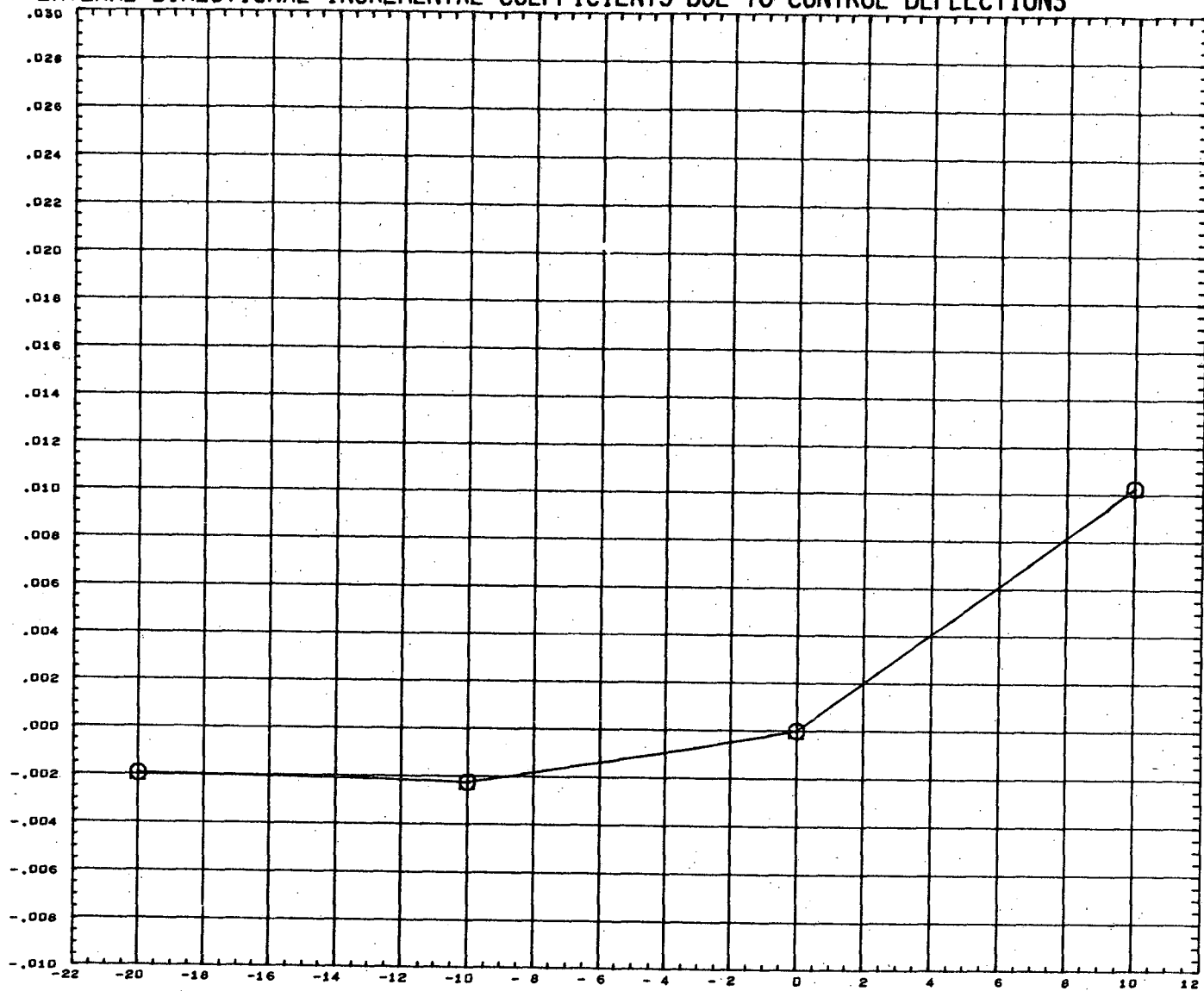
INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTEL V) DEGREES

SYMBOL	PARAMETRIC VALUES		DATA SOURCE				REFERENCE INFORMATION			
	ALPHA	MACH	BETA	DATASET	DLTEL V	DATASET	DLTEL V	SREF	14.9040	50 IN.
Q	15.000	CANARD	0.000	S35EAB	- 20.000	S35EAC	- 10.000	LREF	3.0120	IN.
			RUDDER	S35EAO	0.000	S35EAA	10.000	BREF	6.0180	IN.
								XMRP	7.2990	IN.
								YMRP	0.0000	IN.
								ZMRP	0.0000	IN.
								SCALE	0.0035	

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLICA)



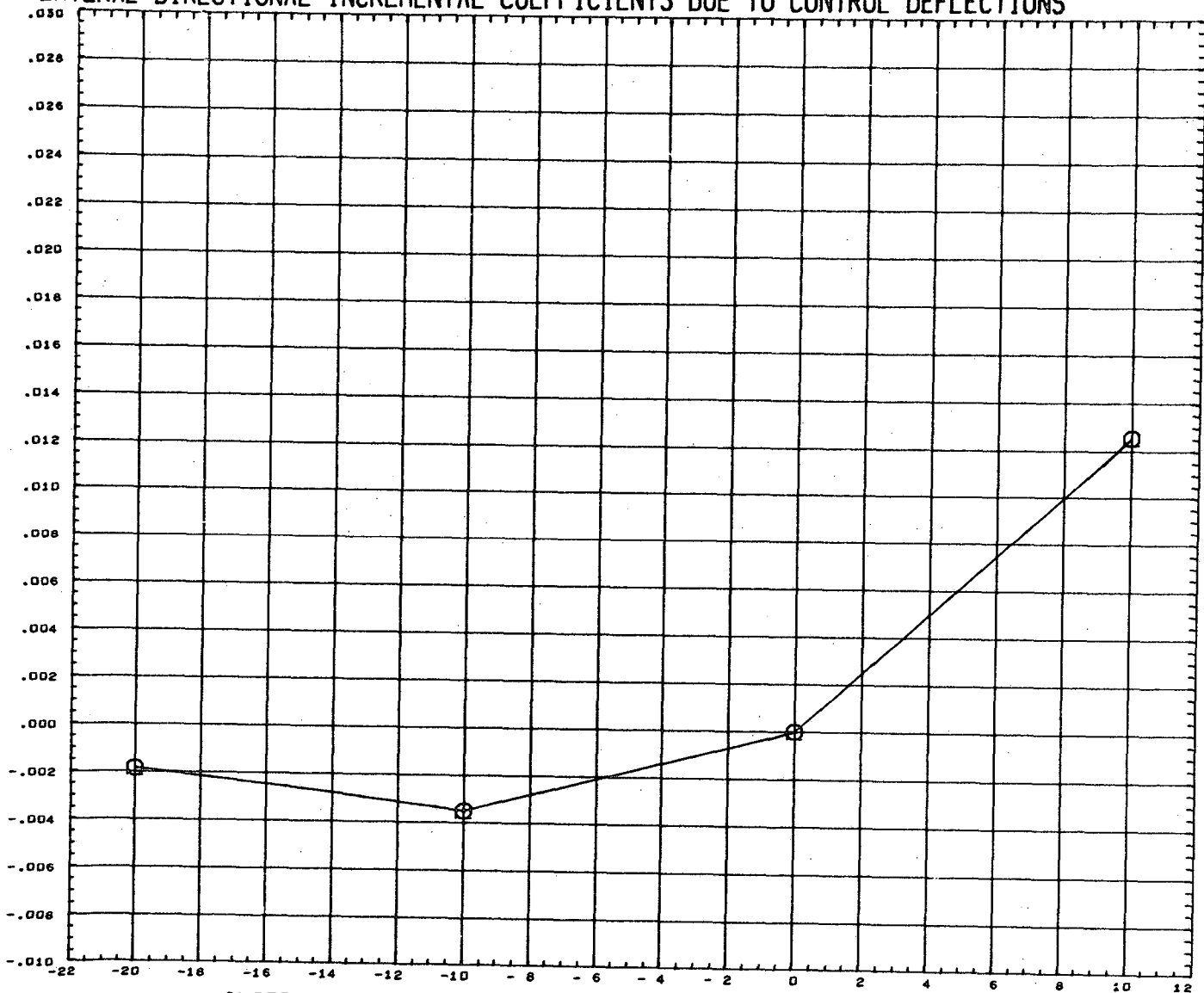
INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTEL V) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
D	20.000	3.000 BETA 0.000	DATA SET DLTEL V	SREF 14.9040 SQ. IN.
		0.000 RUDDER 0.000	S35EAB - 20.000 S35EAC - 10.000	LREF 3.0120 IN.
			S35EAO 0.000 S35EAA 10.000	BREF 6.0180 IN.
				XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)

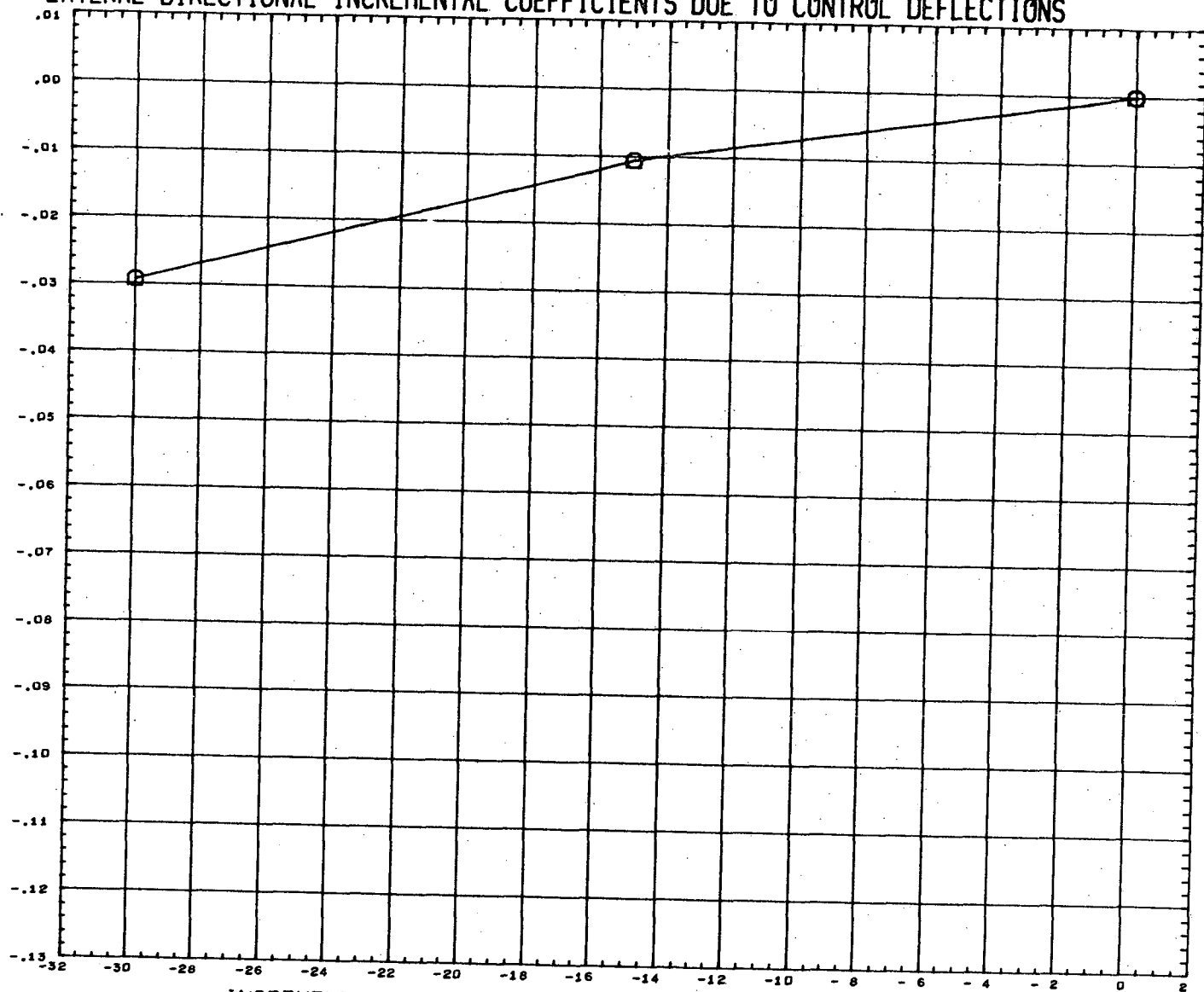


INCREMENTAL ELEVON DEFLECTION, DELTA-ELEVON (DLTEL V) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	23.000	MACH 3.000 BETA 0.000 DATASET DLTEL V DATASET DLTEL V SREF 14.9040 SQ. IN.		
		CANARD 0.000 RUDDER 0.000 S35EAB - 20.000 S35EAC - 10.000 LREF 3.0120 IN.		
			S35EAO 0.000 S35EAA 10.000 BREF 6.0180 IN.	
				XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I*C

NORMAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, $\Delta T_A - C_N$ (DLTGN)

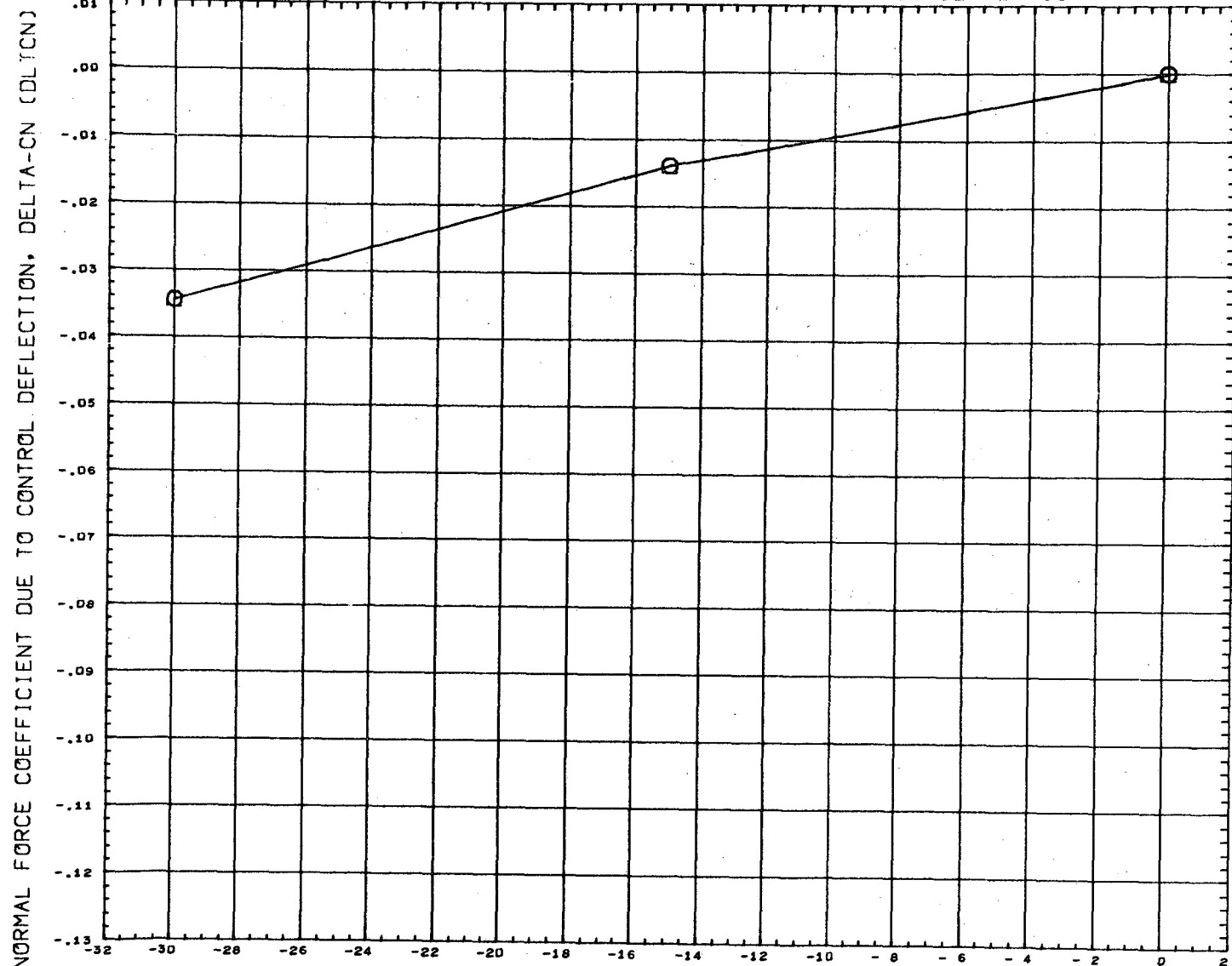


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCD) DEGREES															
SYMBOL		ALPHA		PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
Q		5.000		MACH		0.900		BETA		0.000		DATASET		DLTCD	
				ELEVON		0.000		RUDDER		0.000		T35CAB		- 30.000	
												T35EAO		0.000	
												T35CAA		- 15.000	
												SREF		14.9040	
												LREF		3.0120	
												BREF		6.0180	
												XMRF		7.2990	
												YMRF		0.0000	
												ZMRF		0.0000	
												SCALE		0.0035	
				DATA HIST. CODE		I*C									

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

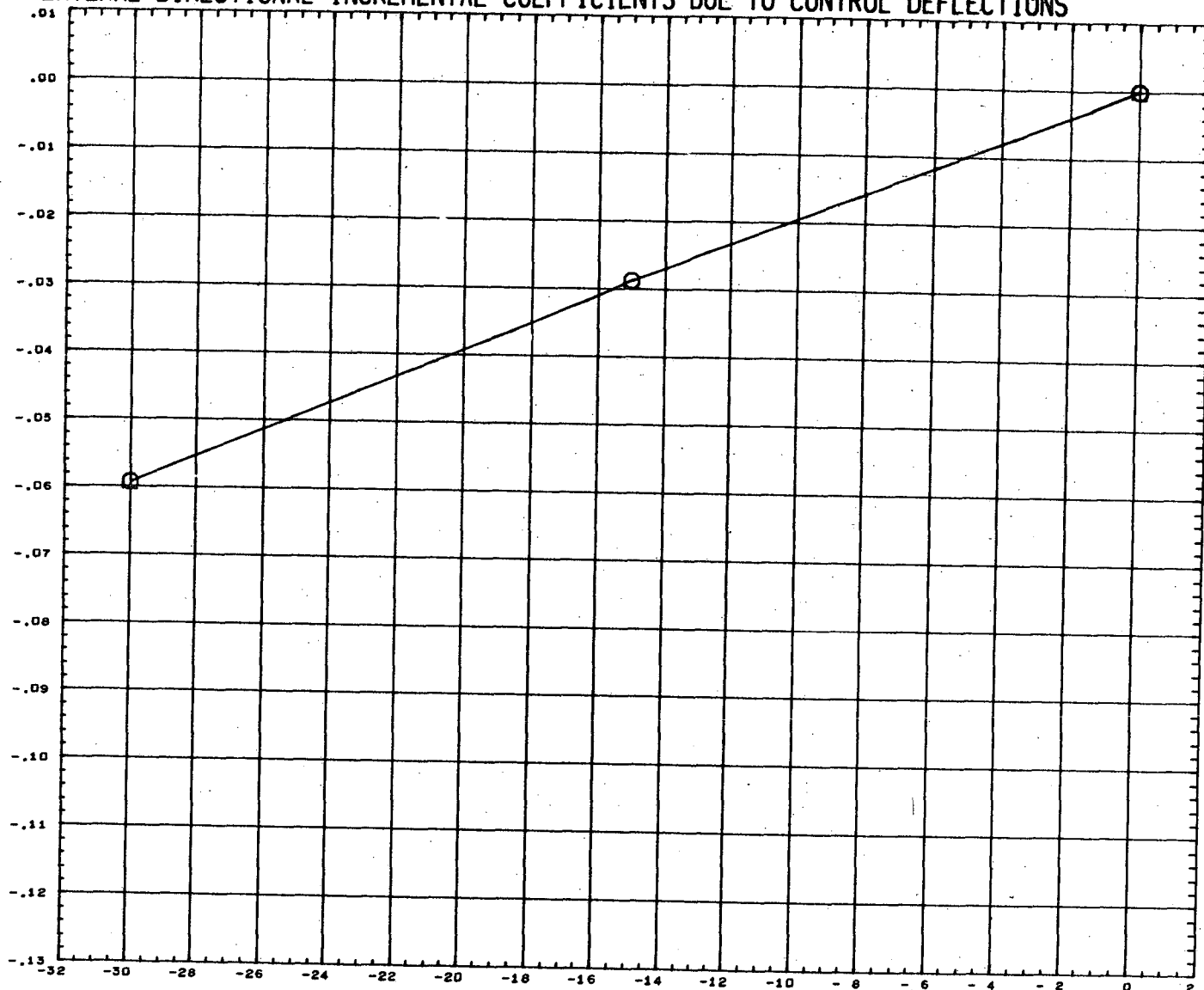


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	10.000	MACH 0.900 BETA 0.000	DATASET DLTCND	SREF 14.9040 SQ. IN.
		ELEVON 0.000 RUDDER 0.000	DATASET DLTCND	LREF 3.0120 IN.
			T35CAB - 30.000 T35CAA - 15.000	BREF 6.0180 IN.
			T35EAO 0.000	XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I&C

NORMAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, $\Delta\text{-CN (DLTCN)}$



SYMBOL	ALPHA
Q	15.000

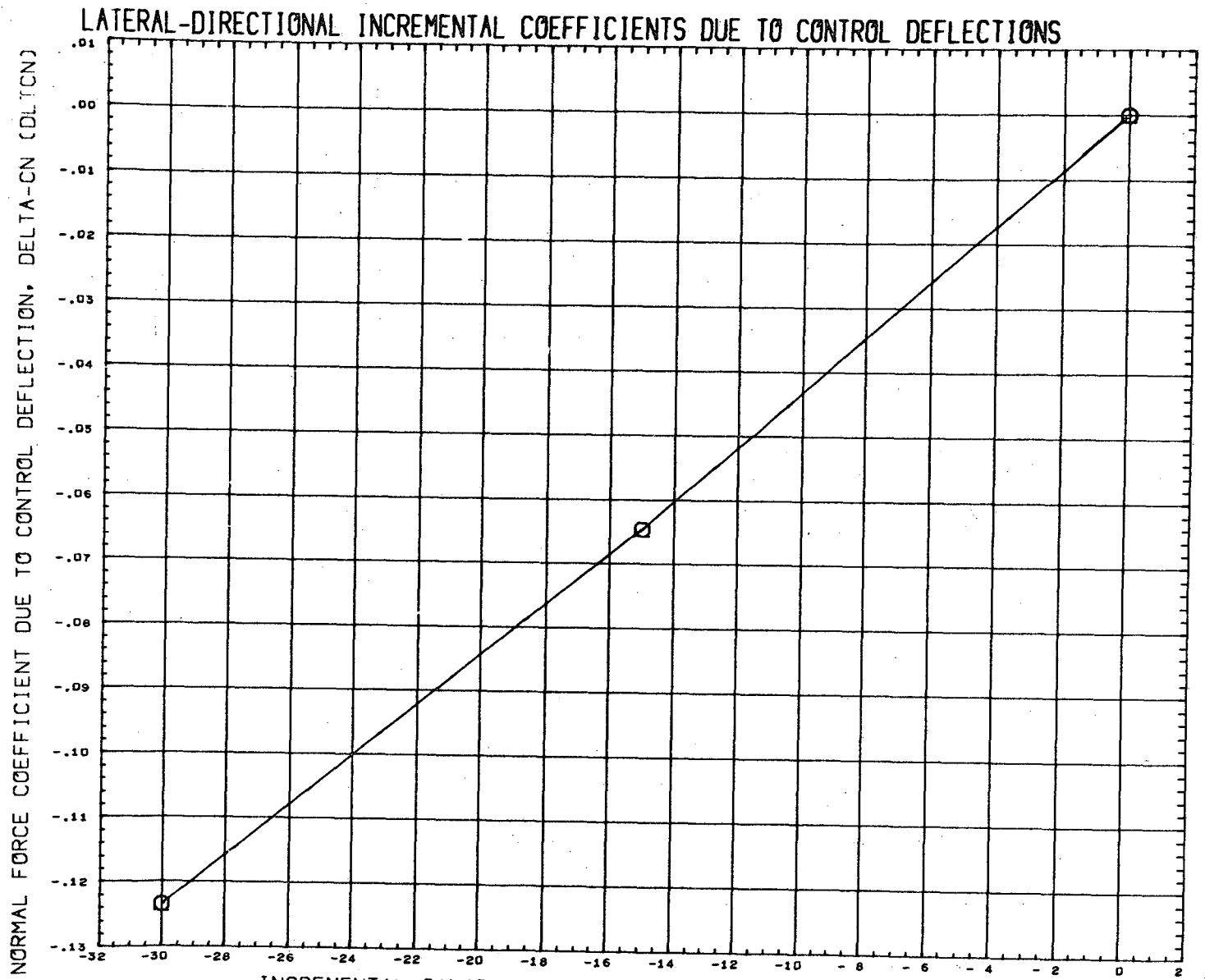
PARAMETRIC VALUES

DATA SOURCE

REFERENCE INFORMATION

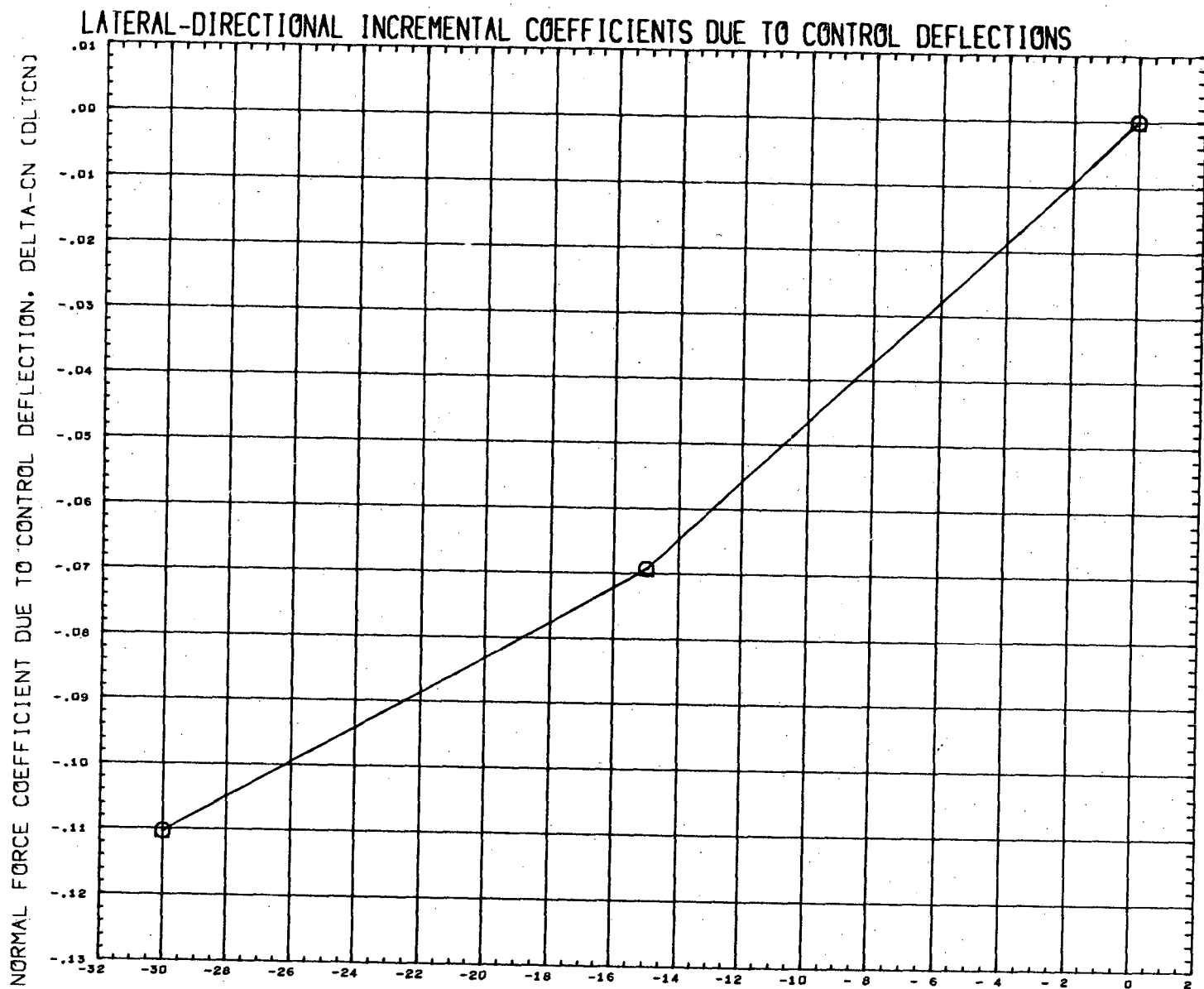
DATA SOURCE			REFERENCE INFORMATION					
NACH	0.900 BETA	0.000 DATASET	DLTCND	DATASET	DLTCND	SREF	14.9040	S9.IN.
ELEVON	0.000 RUDDER	0.000 T35CAB	- 30.000	T35CAA	- 15.000	LREF	3.0120	IN.
		T35EAO	0.000			BREF	6.0180	IN.
						XMRP	7.2990	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0035	
DATA HIST. CODE		I=C						

DATA HIST. CODE I#C



SYMBOL		ALPHA		PARAMETRIC VALUES		DATA SOURCE				REFERENCE INFORMATION			
□	20.000	<u>MACH</u>	0.900	BETA	0.000	DATASET	DLTCND	DATASET	DLTCND	SREF	14.9040	SQ. IN.	
		<u>ELEVON</u>	0.000	RUDDER	0.000	T35CAB	- 30.000	T35CAA	- 15.000	LREF	3.0120	IN.	
						T35EAO	0.000			BREF	6.0180	IN.	
										XMRF	7.2990	IN.	
										YMRP	0.0000	IN.	
										ZMRP	0.0000	IN.	
										SCALE	0.0035		

DATA HIST. CODE I#C

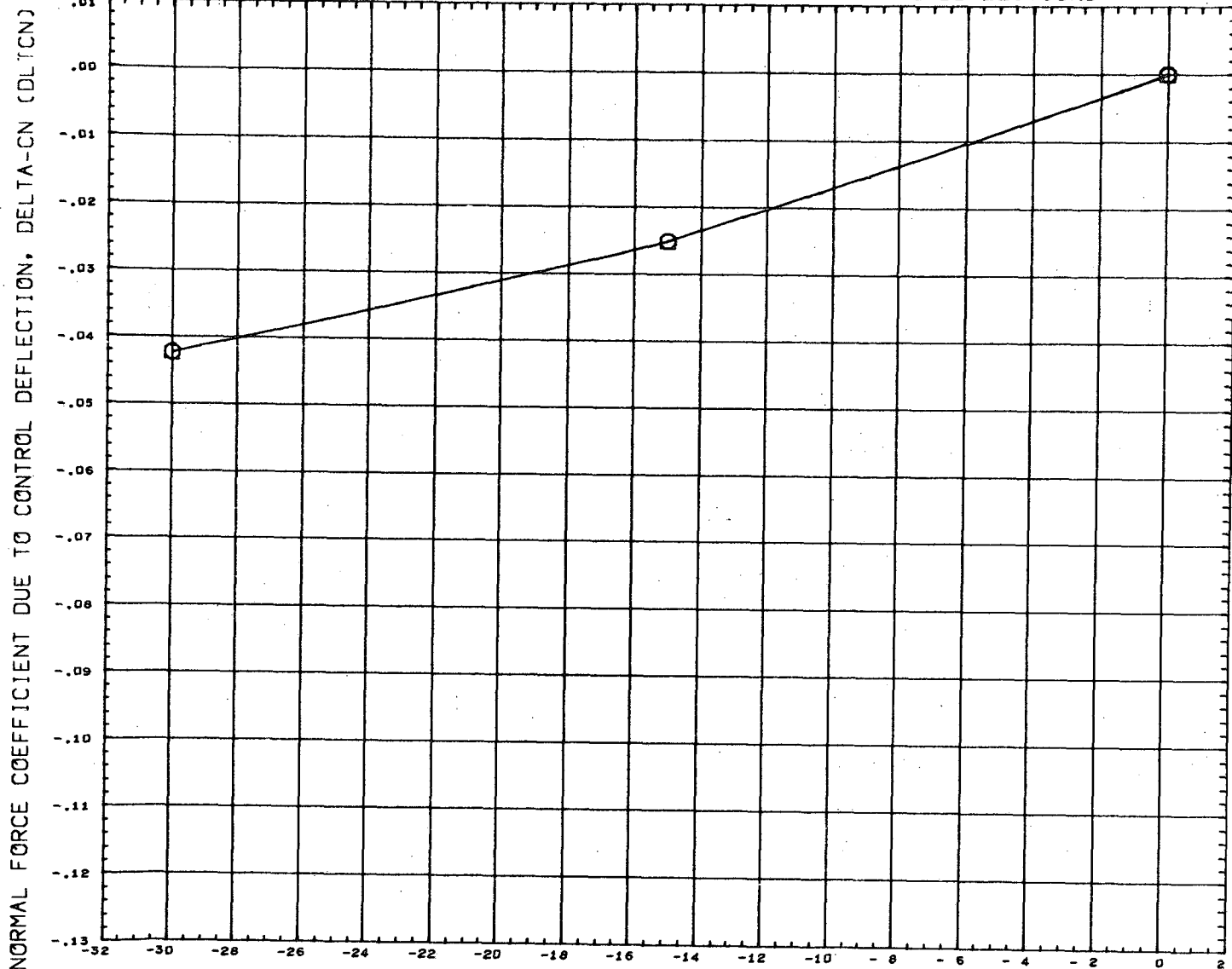


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

EXPERIMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES												
SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE		REFERENCE INFORMATION				
Q	23.000	<u>MACH</u>	0.900	BETA	0.000	DATASET	DLTCND	DATASET	DLTCND	SREF	14.9040	50. IN.
		ELEVON	0.000	RUDDER	0.000	T35CAB	- 30.000	T35CAA	- 15.000	LREF	3.0120	IN.
						T35EAO	0.000			BREF	6.0180	IN.
										XMRF	7.2990	IN.
										YMRF	0.0000	IN.
										ZMRF	0.0000	IN.
										SCALE	0.0035	
		DATA HIST. CODE	I*C									

DATA HIST. CODE I=C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

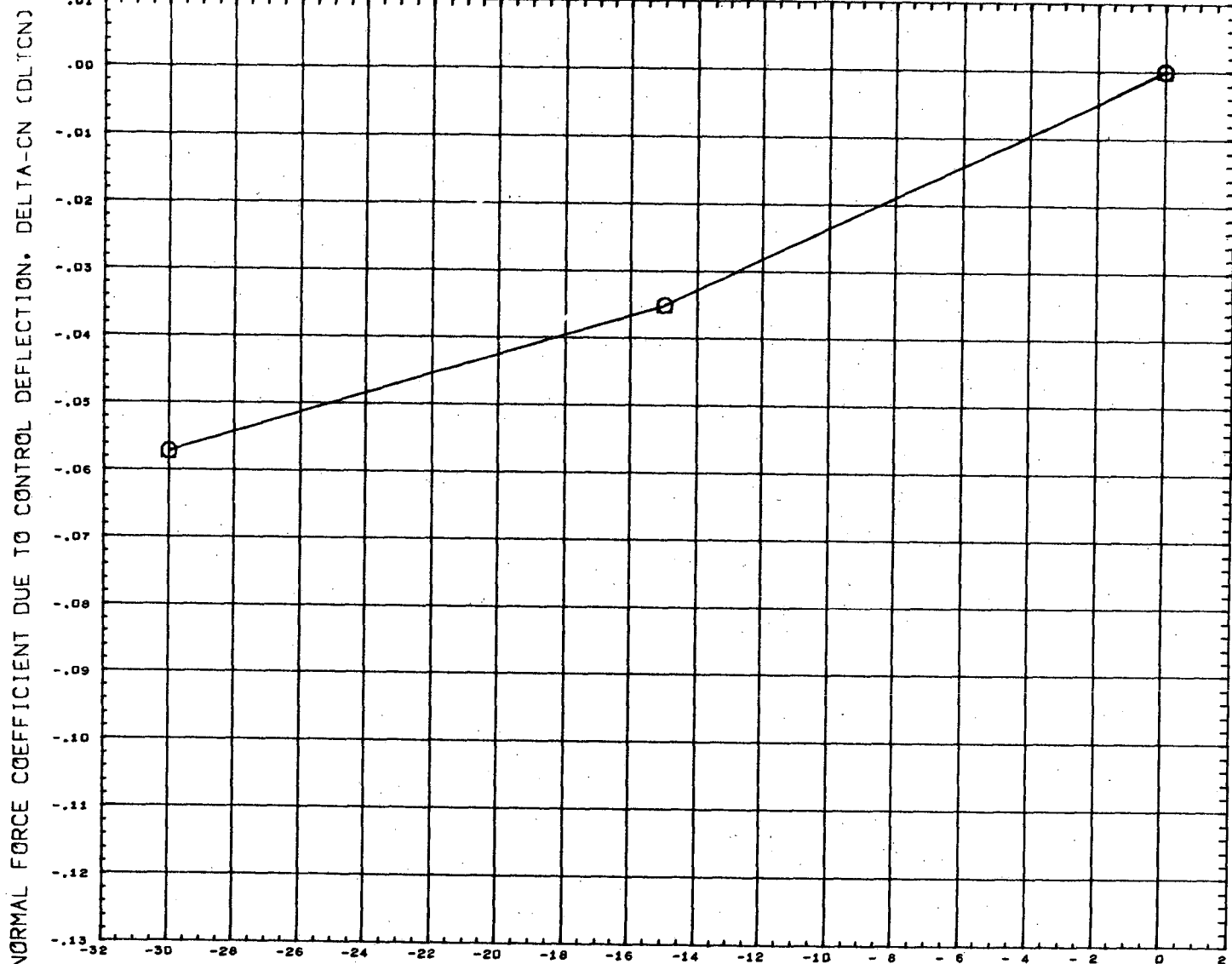


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
		MACH	BETA	RUDDER		DLTCND	DLTCND			SREF	SQ. IN.	
Q	5.000	ELEVON	1.200	0.000	0.000	T35CAB - 30.000	T35CAA - 15.000			14.9040	IN.	
			0.000	0.000		T35EAO 0.000				3.0120	IN.	
										6.0180	IN.	
										7.2990	IN.	
										0.0000	IN.	
										0.0000	IN.	
										0.0035		

DATA HIST. CODE I*C

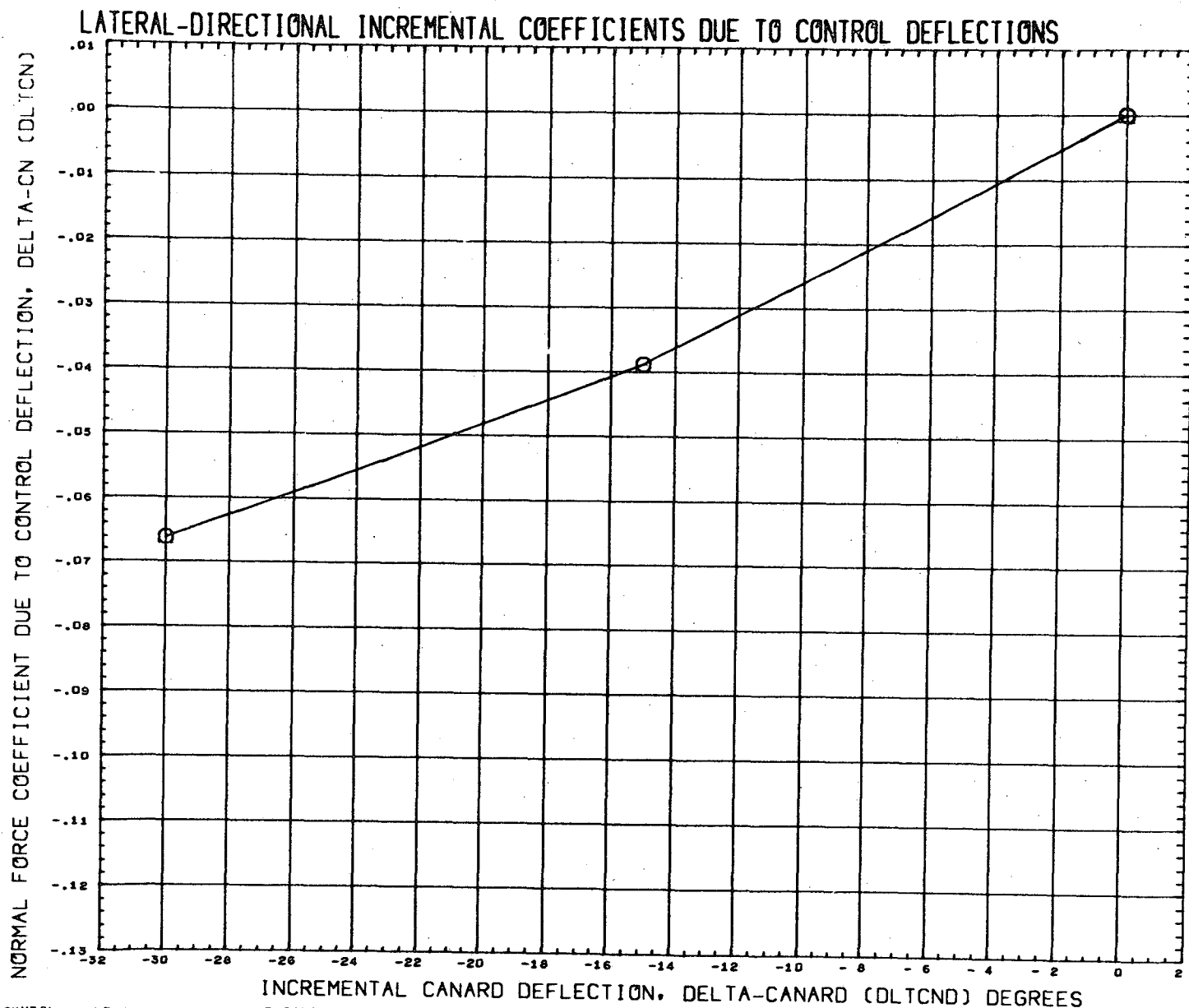
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	10.000	MACH 1.200 BETA 0.000 DATASET DLTCND DATASET DLTCND SREF 14.9040 SQ. IN.		
		ELEVON 0.000 RUDDER 0.000 T35CAB - 30.000 T35CAA - 15.000 LREF 3.0120 IN.		
			T35EAO 0.000 YMRP 7.2990 IN.	
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

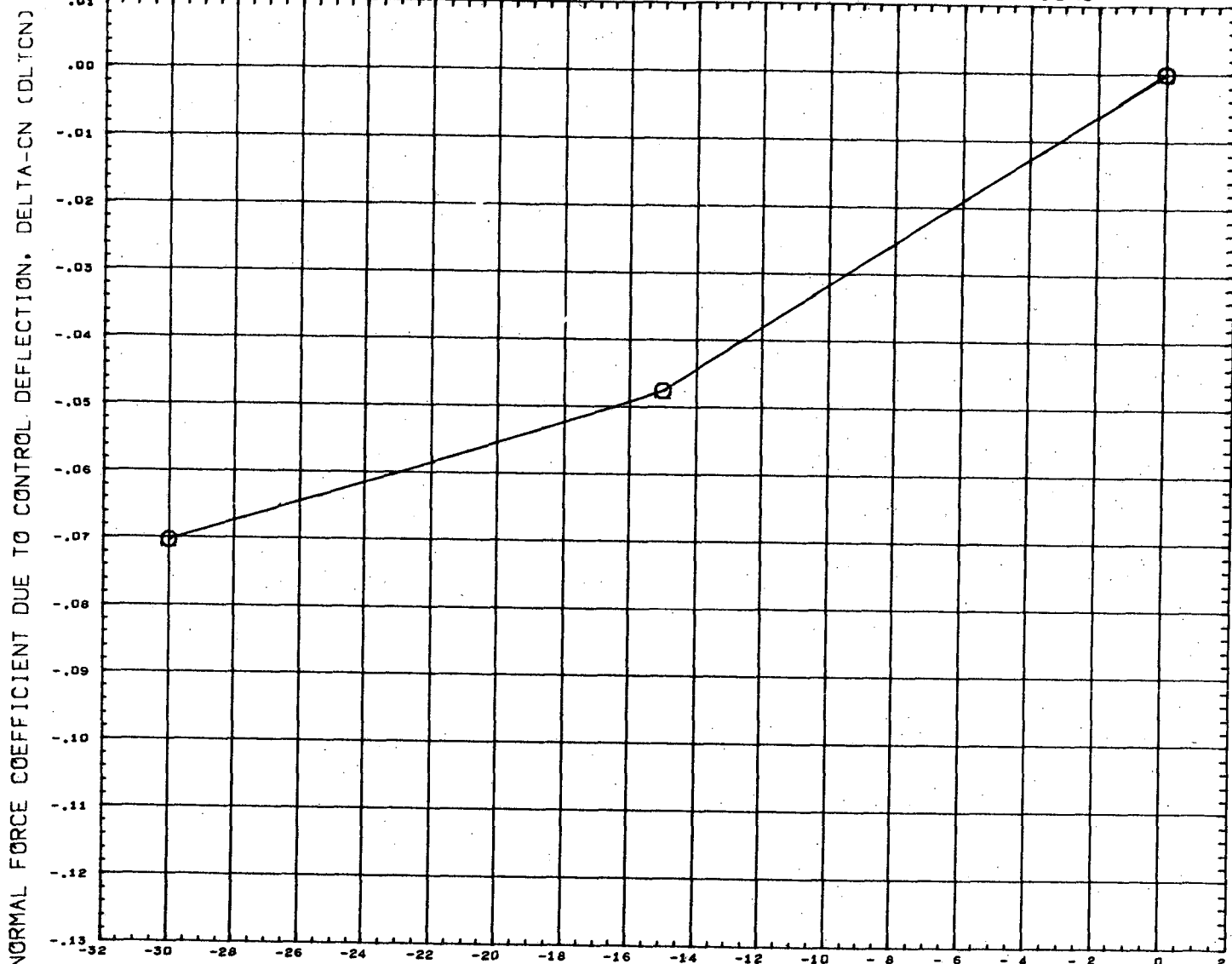
DATA HIST. CODE I#C



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
○	15.000	MACH	1.200	BETA	0.000	DATASET	DLTCND	DATASET	DLTCND	SREF	14.9040	Sq. IN.	
		ELEVON	0.000	RUDDER	0.000	T35CAB	- 30.000	T35CAA	- 15.000	LREF	3.0120	IN.	
						T35EAO	0.000			BREF	6.0180	IN.	
										XMRP	7.2990	IN.	
										YMRP	0.0000	IN.	
										ZMRP	0.0000	IN.	
										SCALE	0.0035		

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

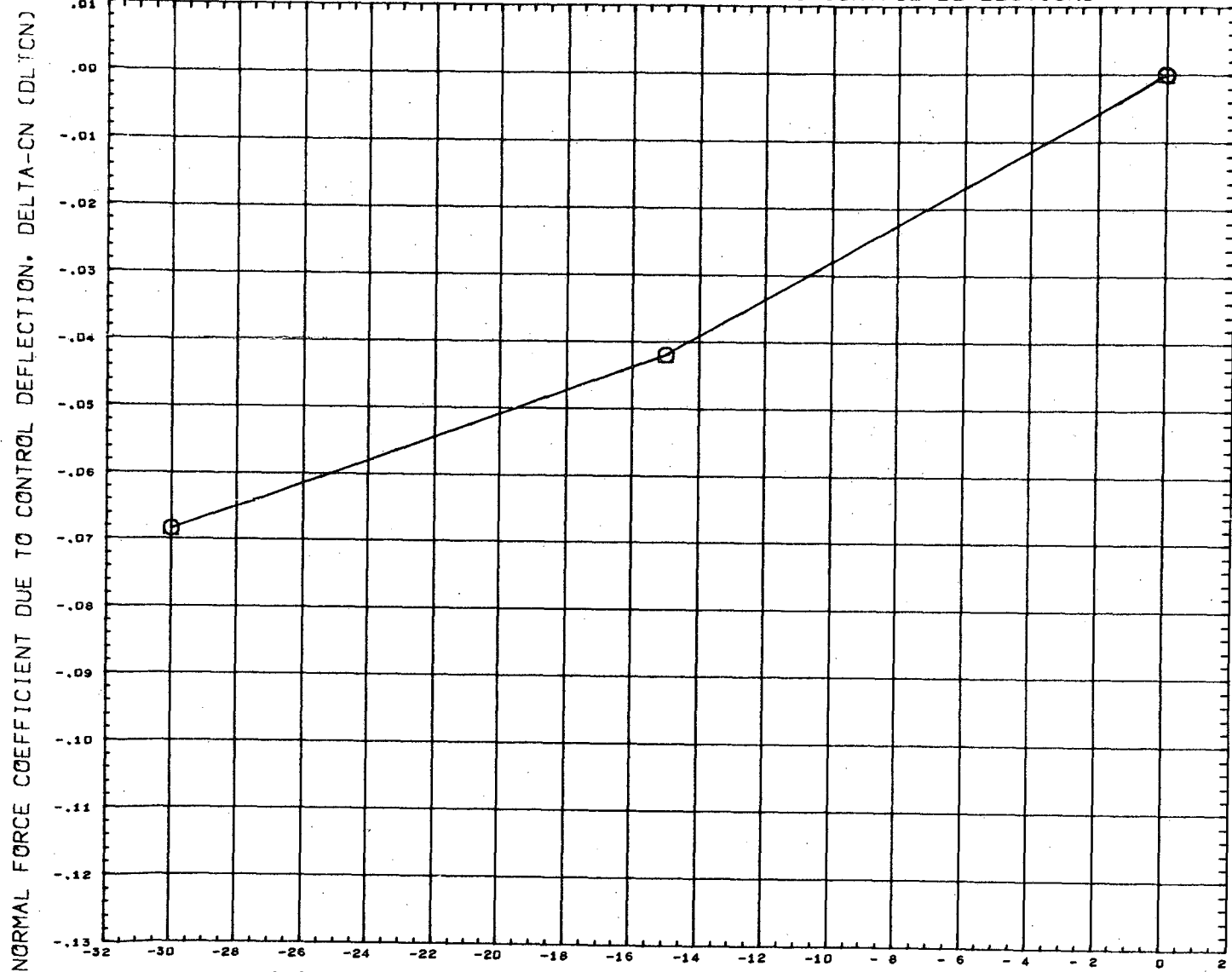


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION		
	ALPHA	BETA	DLTCND	DLTCND	SREF	IN.	SQ. IN.
Q	20.000	1.200	0.000	T35CAB - 30.000	LREF	3.0120	IN.
		0.000	0.000	T35EAO 0.000	BREF	6.0180	IN.
					XMRF	7.2990	IN.
					YMRF	0.0000	IN.
					ZMRF	0.0000	IN.
					SCALE	0.0035	

DATA HIST. CODE 14C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

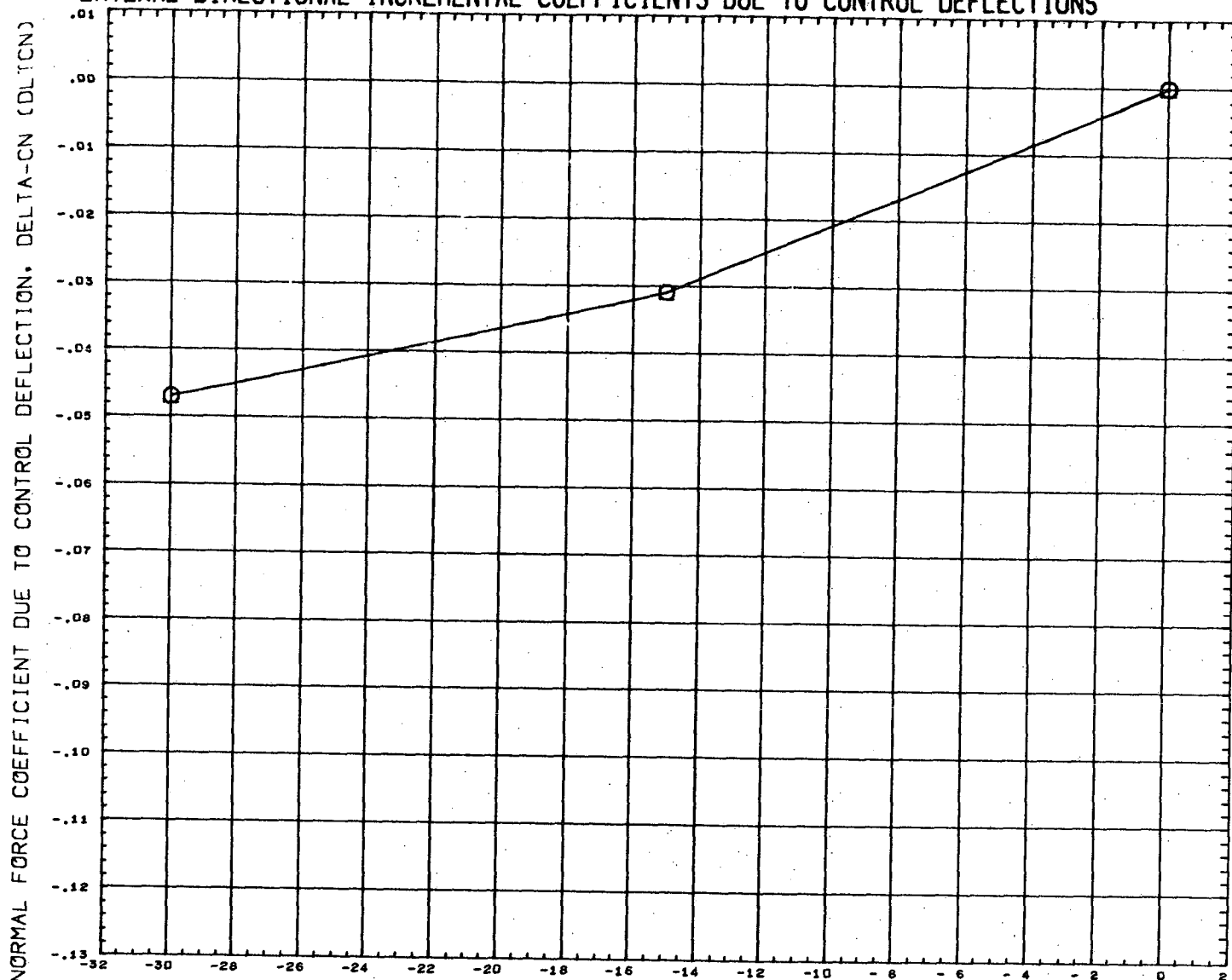


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	23.000	MACH 1.200 BETA 0.000	DATA SET DLTCND	SREF 14.9040 SQ. IN.
		ELEVON 0.000 RUDDER 0.000	DATA SET DLTCND	LREF 3.0120 IN.
			T35CAB - 30.000 T35CAA - 15.000	BREF 6.0180 IN.
			T35EAO 0.000	YMRP 7.2990 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035 IN.

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

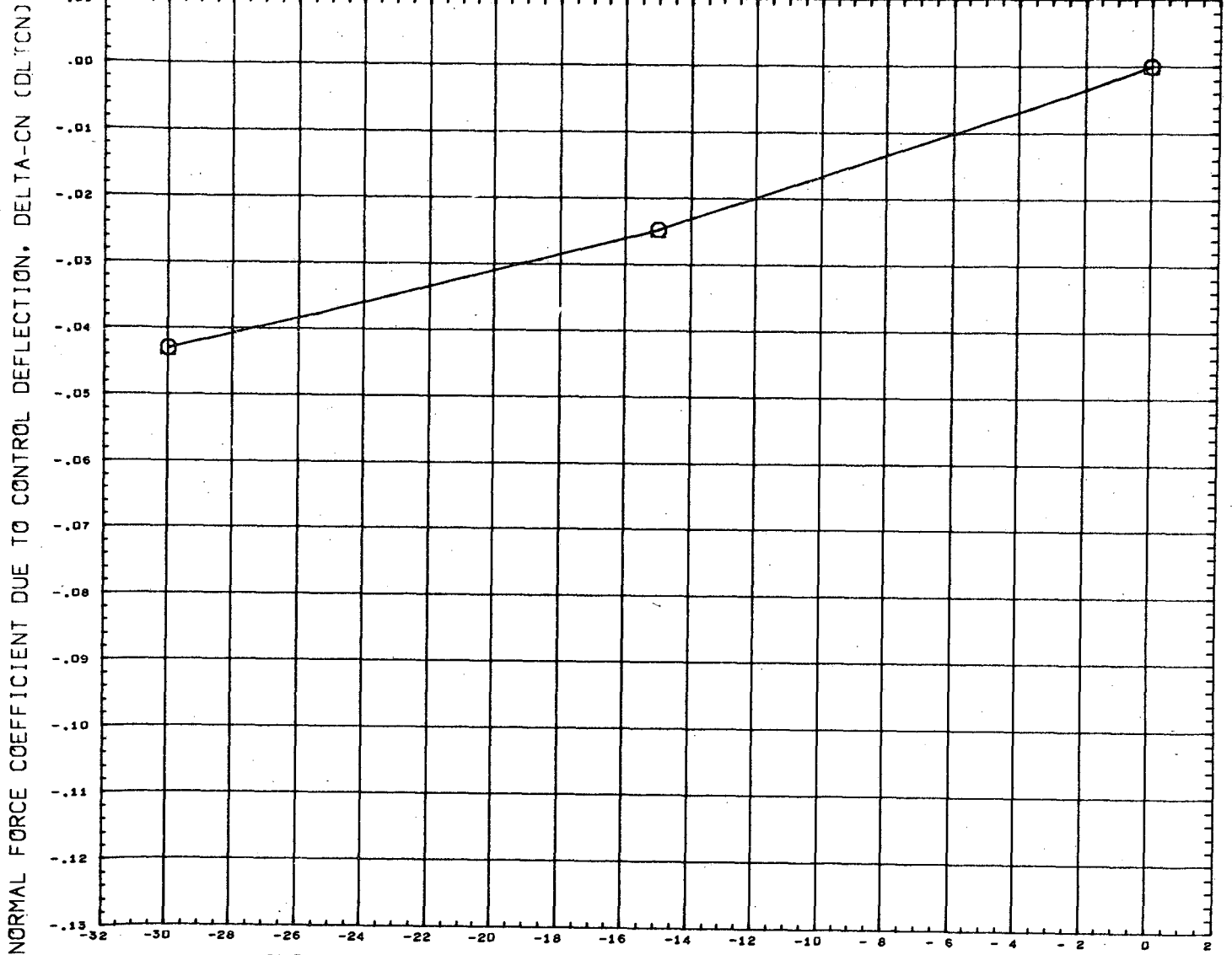


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
□	5.000	MACH	2.000	BETA	0.000	DATASET	DLTCND	DATASET	DLTCND	SREF	14.9040	Sq. IN.	
		ELEVON	0.000	RUDDER	0.000	T35CAB	- 30.000	T35CAA	- 15.000	LREF	3.0120	IN.	
						T35EAO	0.000			BREF	6.0180	IN.	
										XMRP	7.2990	IN.	
										YMRP	0.0000	IN.	
										ZMRP	0.0000	IN.	
										SCALE	0.0035		

DATA HIST. CODE I*C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



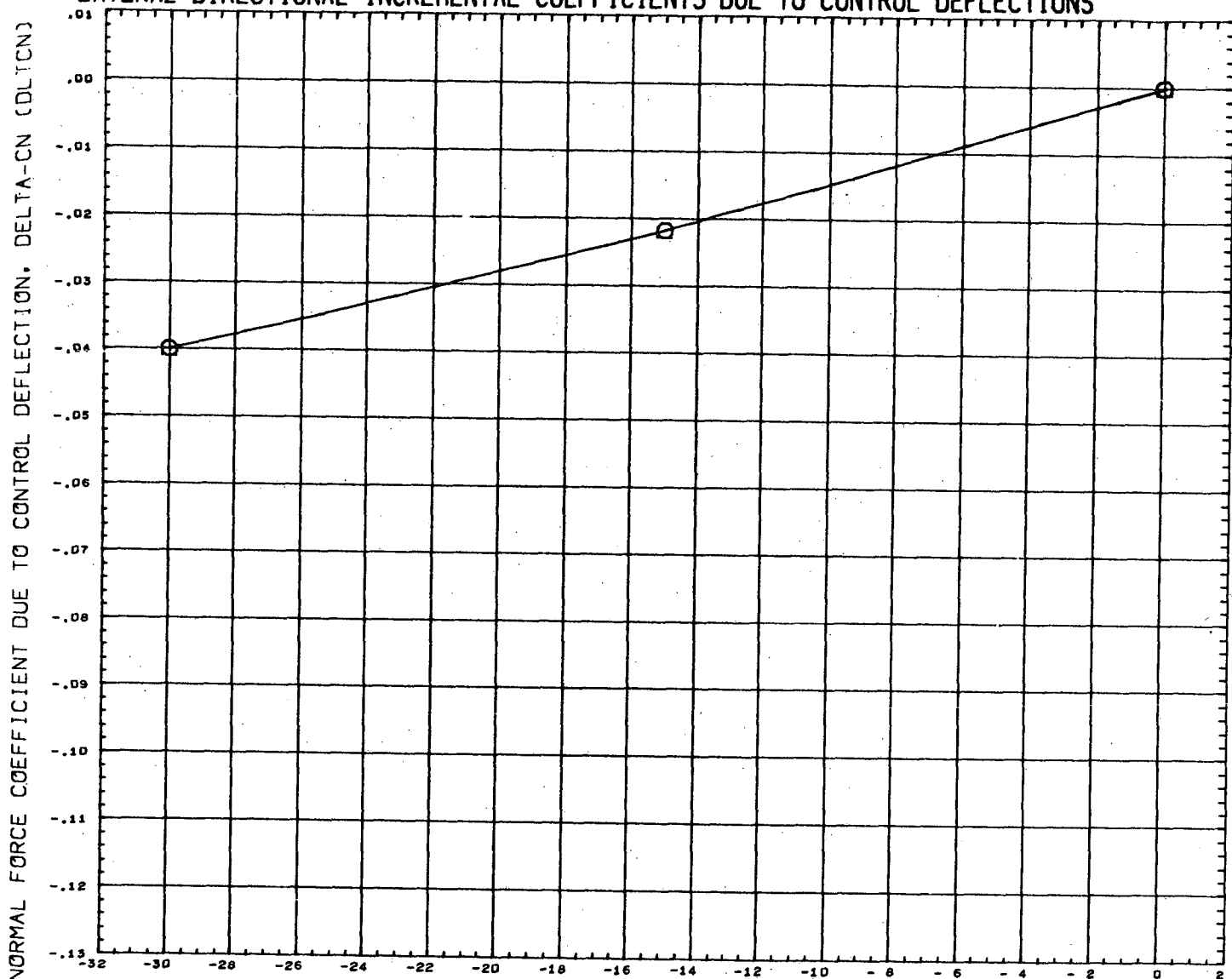
INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
○	10.000	<u>MACH</u>	2.000	BETA	0.000	DATASET	DLTCND	DATASET	DLTCND	SREF	14.9040	SQ. IN.
		ELEVON	0.000	RUDDER	0.000	T35CAB	- 30.000	T35CAA	- 15.000	LREF	3.0120	IN.
						T35EAO	0.000			BREF	6.0180	IN.
										XMRF	7.2990	IN.
										YMRF	0.0000	IN.
										ZMRF	0.0000	IN.
										SCALE	0.0035	
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DATA HIST. CODE I* C

6

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

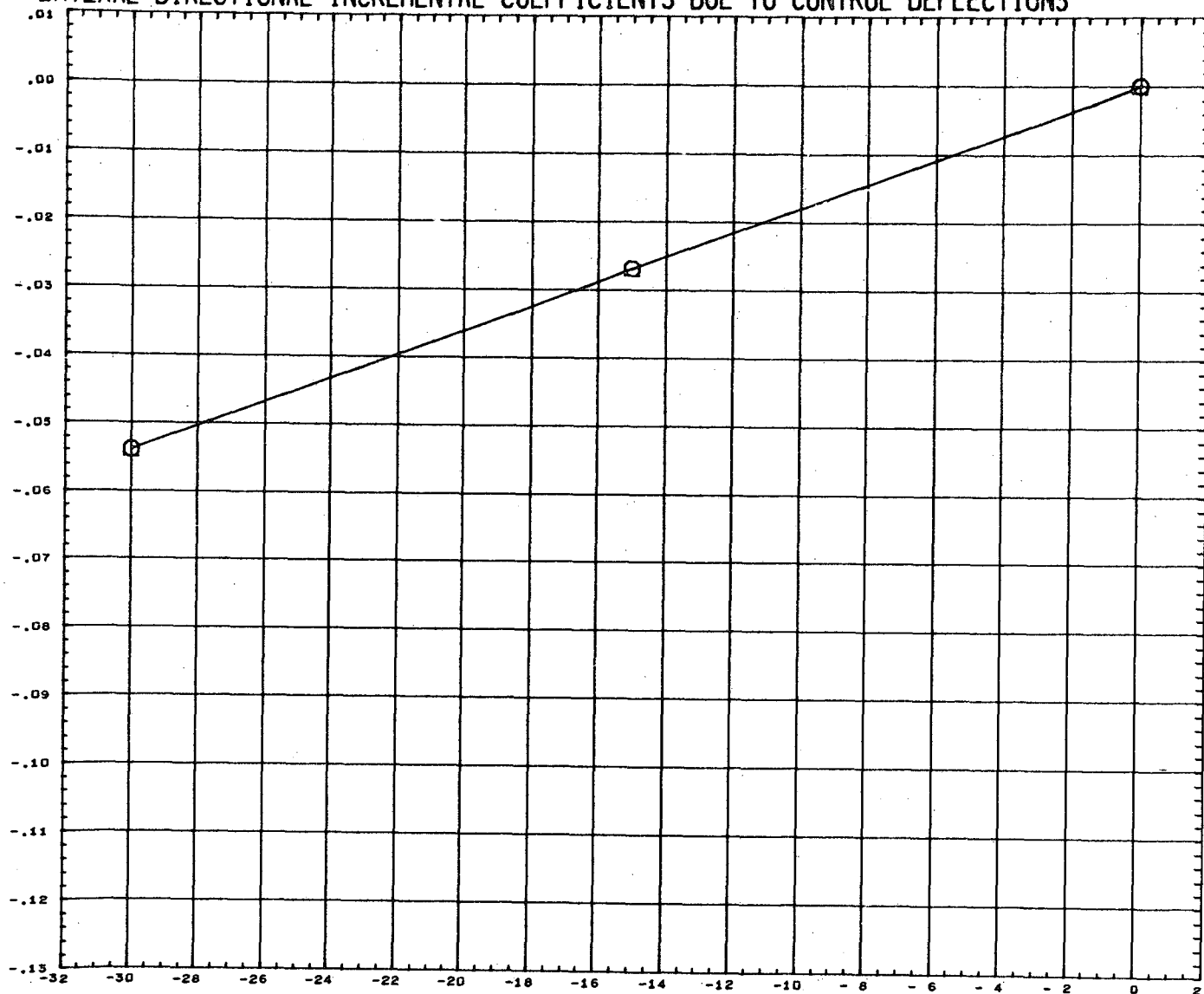


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION		
	ALPHA	BETA	DATASET	DLTCND	SREF	14.9040	SQ. IN.
O	15.000	0.000	T35CAB	- 30.000	LREF	3.0120	IN.
		0.000	T35EAO	0.000	BREF	6.0180	IN.
					XMRP	7.2990	IN.
					YMRP	0.0000	IN.
					ZMRP	0.0000	IN.
					SCALE	0.0035	

DATA HIST. CODE I* C

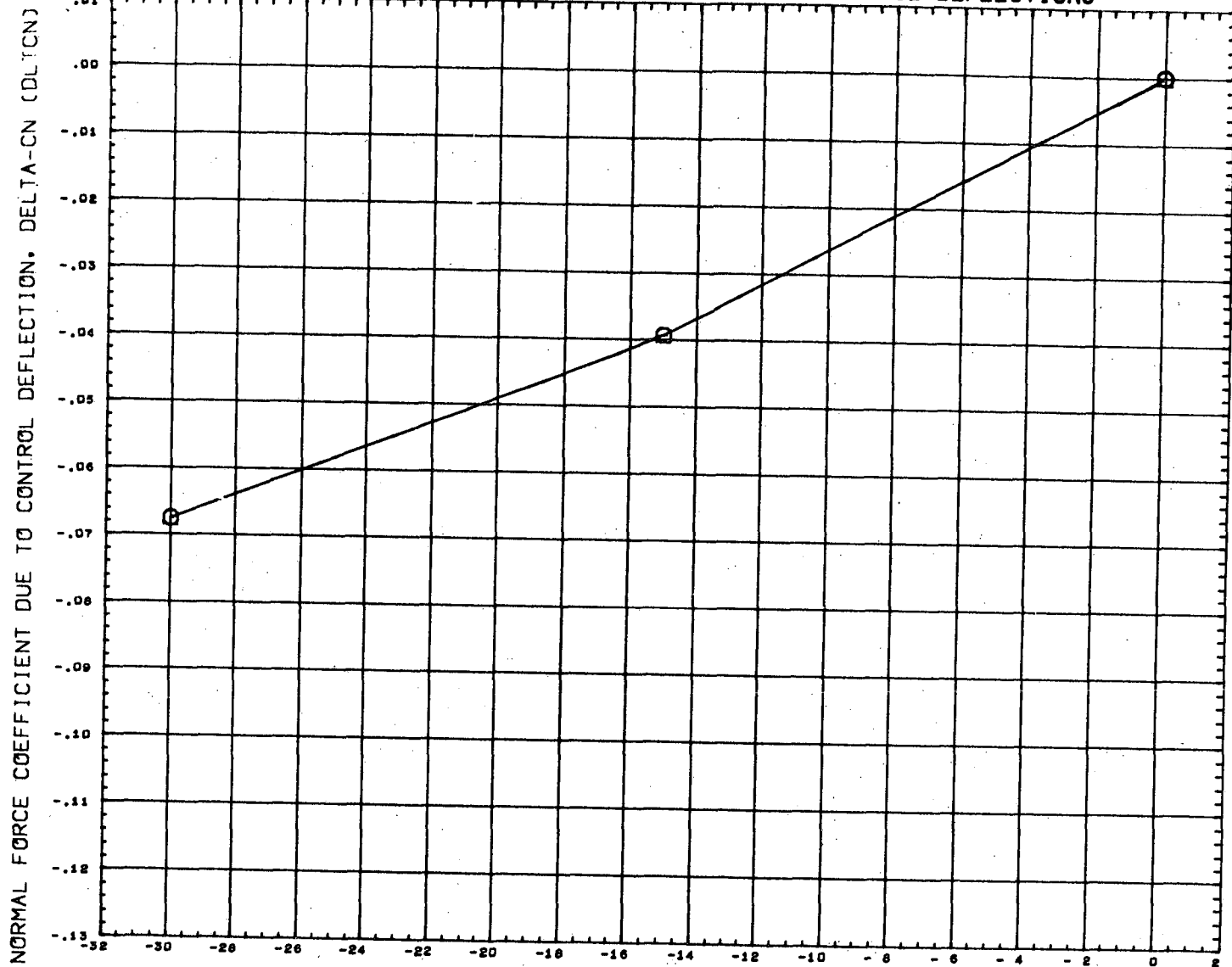
NORMAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CN (DLTCN)



INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL		ALPHA		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
Q	20.000	MACH	2.000	BETA	0.000	DATASET	DLTCND	DATASET	DLTCND
		ELEVON	0.000	RUDDER	0.000	T35CAB	- 30.000	T35CAA	- 15.000
						T35EAO	0.000		
								SREF	14.9040
								LREF	3.0120
								BREF	6.0180
								XMRP	7.2990
								YMRP	0.0000
								ZMRP	0.0000
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LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



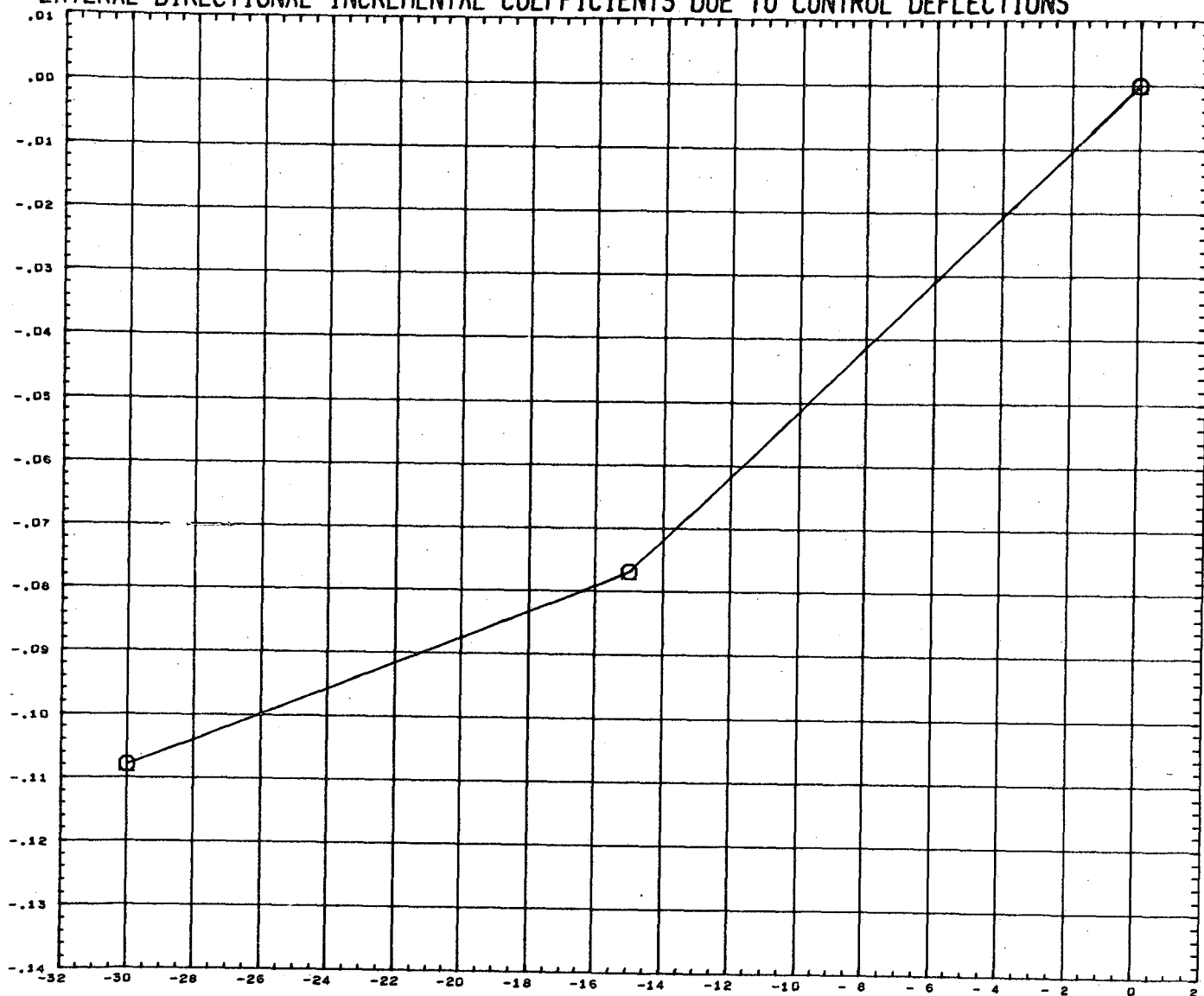
INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	23.000	<u>MACH</u> 2.000 BETA 0.000	DATA SET DLTCND	SREF 14.9040 50. IN.
		ELEVON 0.000 RUDDER 0.000	DATA SET DLTCND	LREF 3.0120 IN.
			T35CAB - 30.000 T35CAA - 15.000	BREF 6.0180 IN.
			T35EAO 0.000	XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I&C

PITCHING MOMENT COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CLM/DLTCNM

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

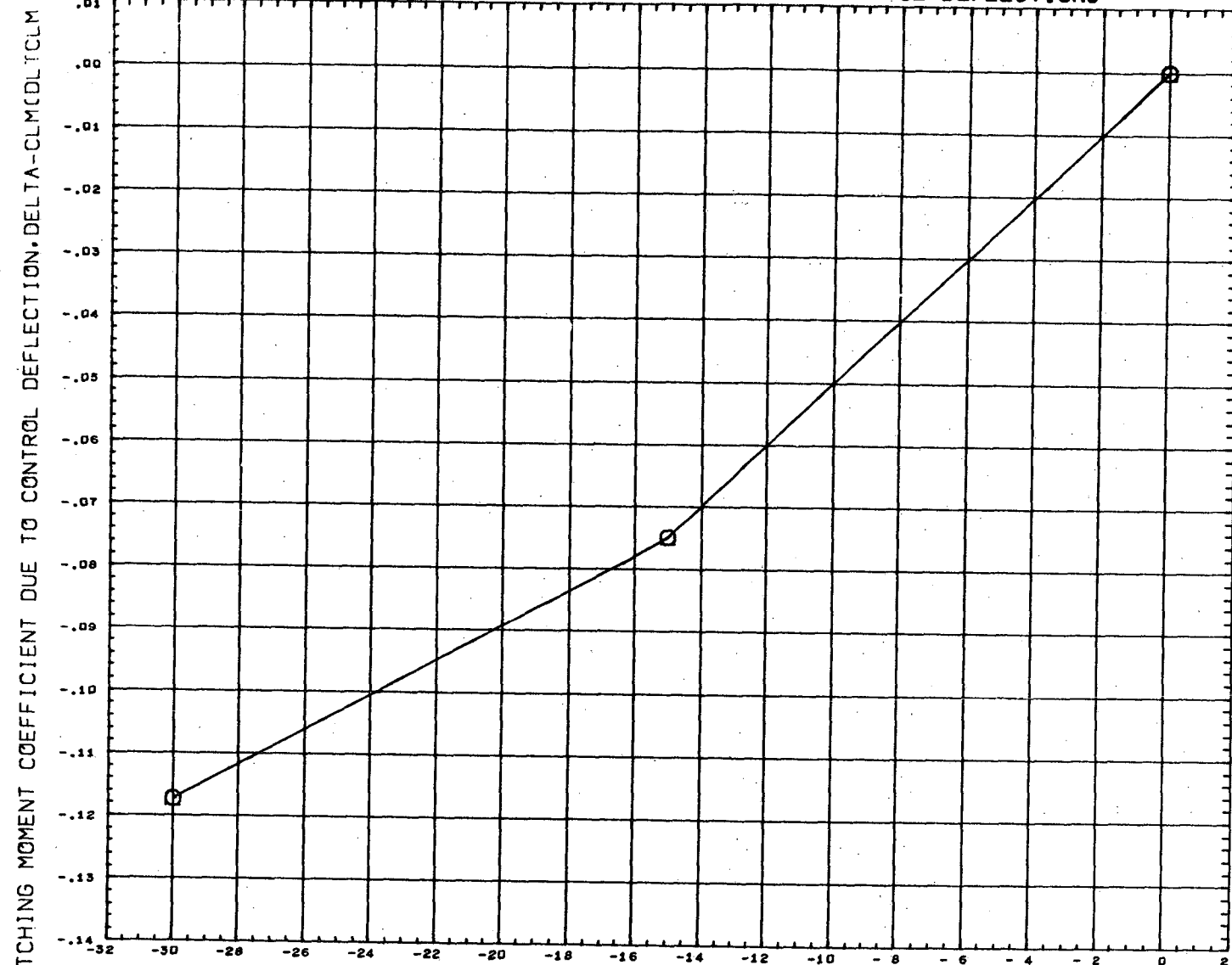


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	5.000	0.900 BETA 0.000	DLTCND	SREF 14.9040 SQ. IN.
		0.000 RUDDER 0.000	T35CAB - 30.000	LREF 3.0120 IN.
			T35EAO 0.000	BREF 6.0180 IN.
				XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I* C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



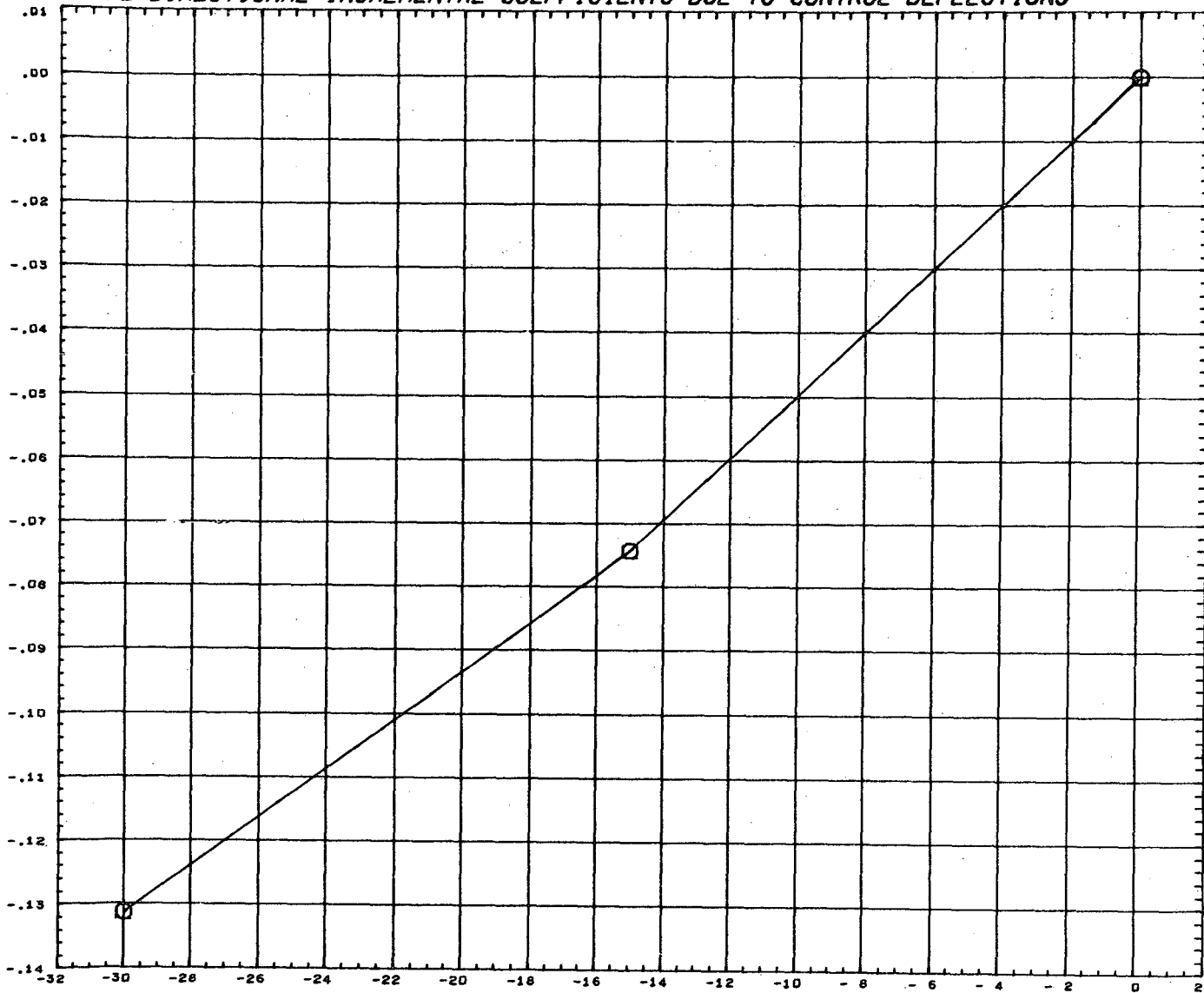
INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

U-2 AIRCRAFT SHOWN DEFLECTION: DELTA-CANARD (DLTCND) DEGREES												
SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE		REFERENCE INFORMATION				
Q	10.000	<u>MACH</u>	0.900	BETA	0.000	DATASET	DLTCND	DATASET	DLTCND	SREF	14.9040	SQ. IN.
		ELEVON	0.000	RUDDER	0.000	T35CAB	- 30.000	T35CAA	- 15.000	LREF	3.0120	IN.
						T35EAO	0.000			BREF	6.0180	IN.
										XMRP	7.2990	IN.
										YMRP	0.0000	IN.
										ZMRP	0.0000	IN.
										SCALE	0.0035	
		DATA HIST. CODE	1*	C								

DATA HIST. CODE I#C

PITCHING MOMENT COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CLM(DLCLM)

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

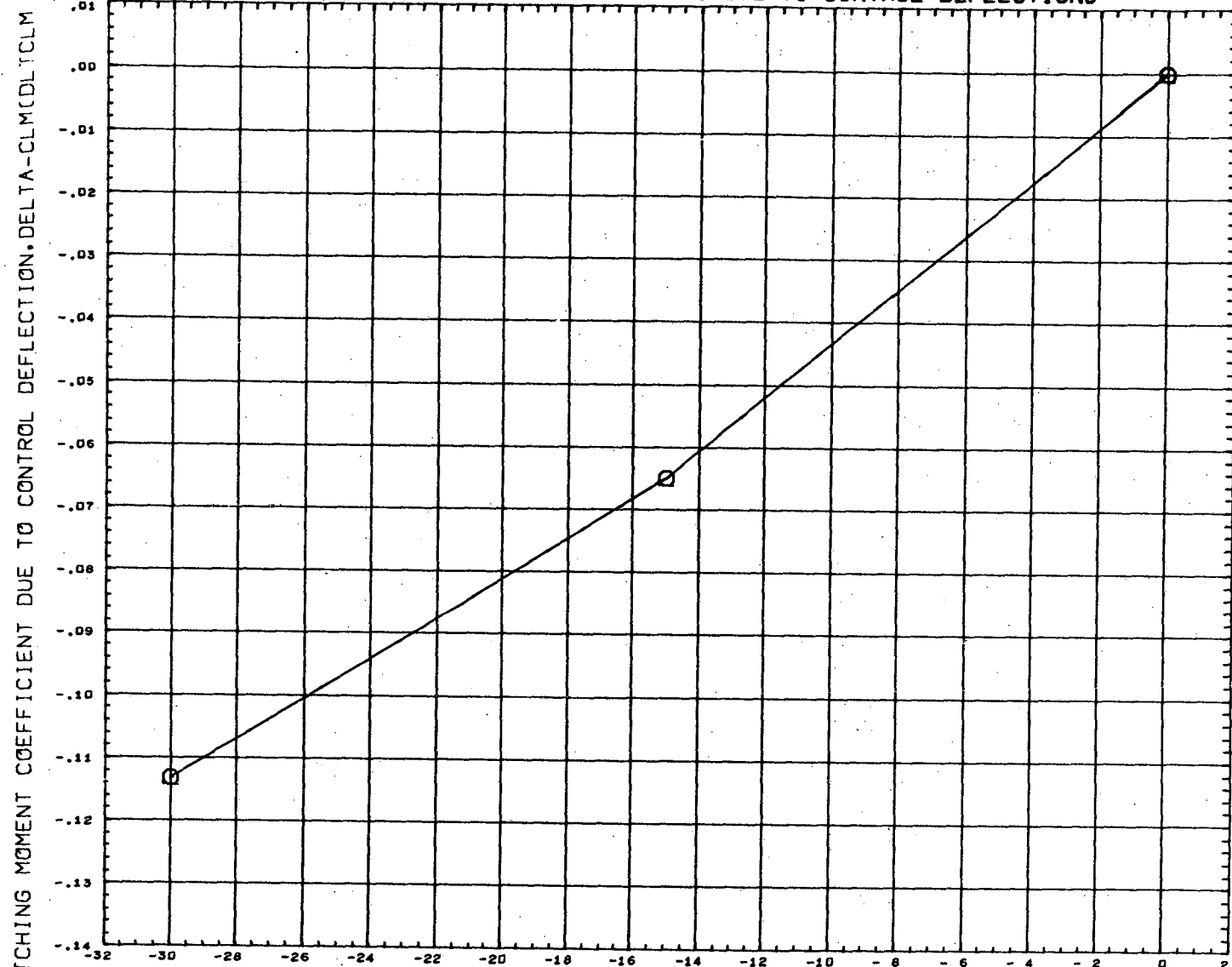


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
	ALPHA	MACH	BETA		DATASET	DLTCND	DATASET	DLTCND	SREF		SQ. IN.
Q	15.000	ELEVON	0.000	RUDDER	0.000				14.9040		
			0.000		T35CAB	- 30.000	T35CAA	- 15.000	LREF	3.0120	IN.
					T35EAO	0.000			BREF	6.0180	IN.
									XMRP	7.2990	IN.
									YMRP	0.0000	IN.
									ZMRP	0.0000	IN.
									SCALE	0.0035	

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

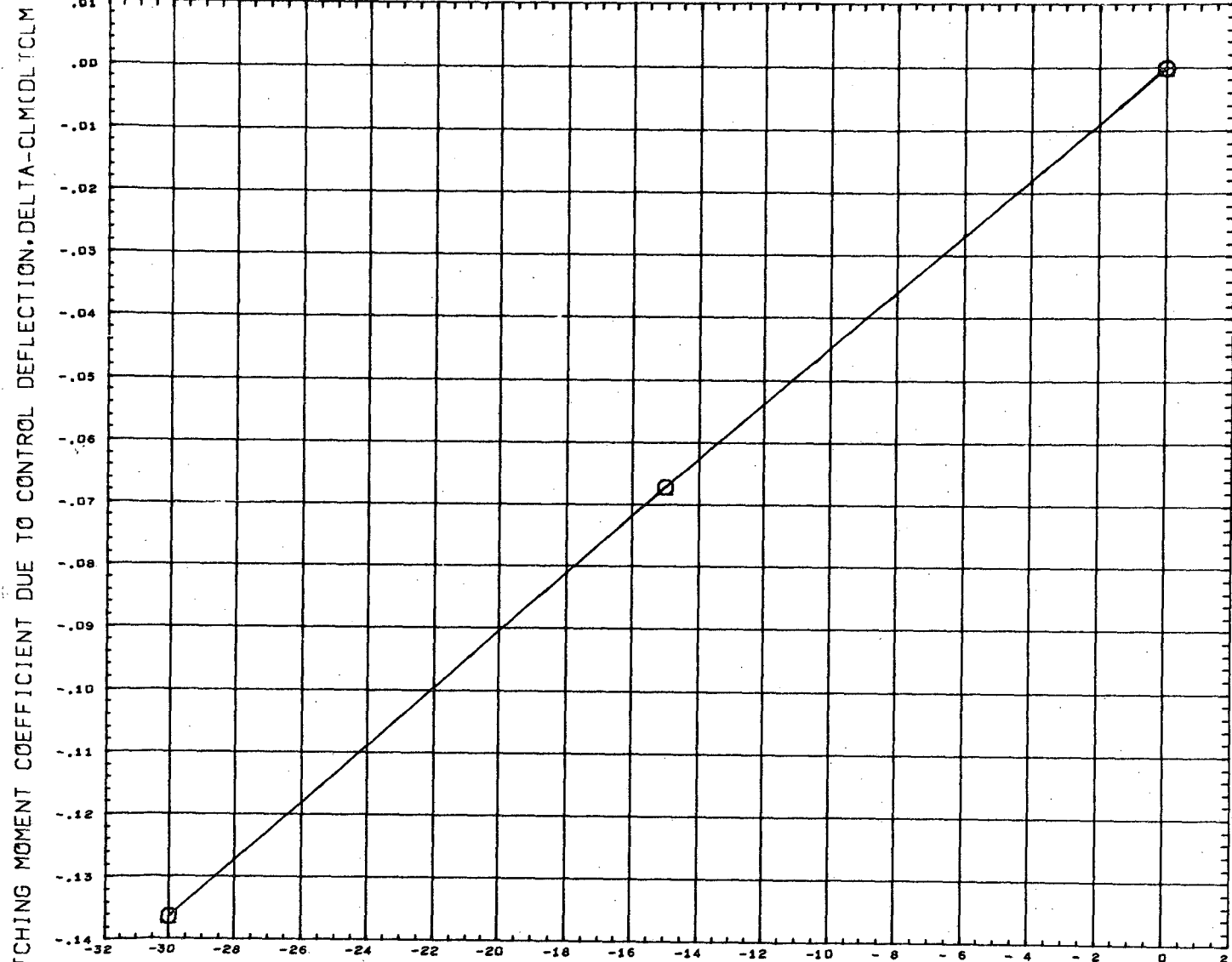


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
Q	20.000		0.900	BETA	0.000	DLTCND		SREF	14.9040	50. IN.
		ELEVON	0.000	RUDDER	0.000	T35CAB	- 30.000	LREF	3.0120	IN.
						T35EAO	0.000	BREF	6.0180	IN.
								XMRF	7.2990	IN.
								YMRF	0.0000	IN.
								ZMRF	0.0000	IN.
								SCALE	0.0035	

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

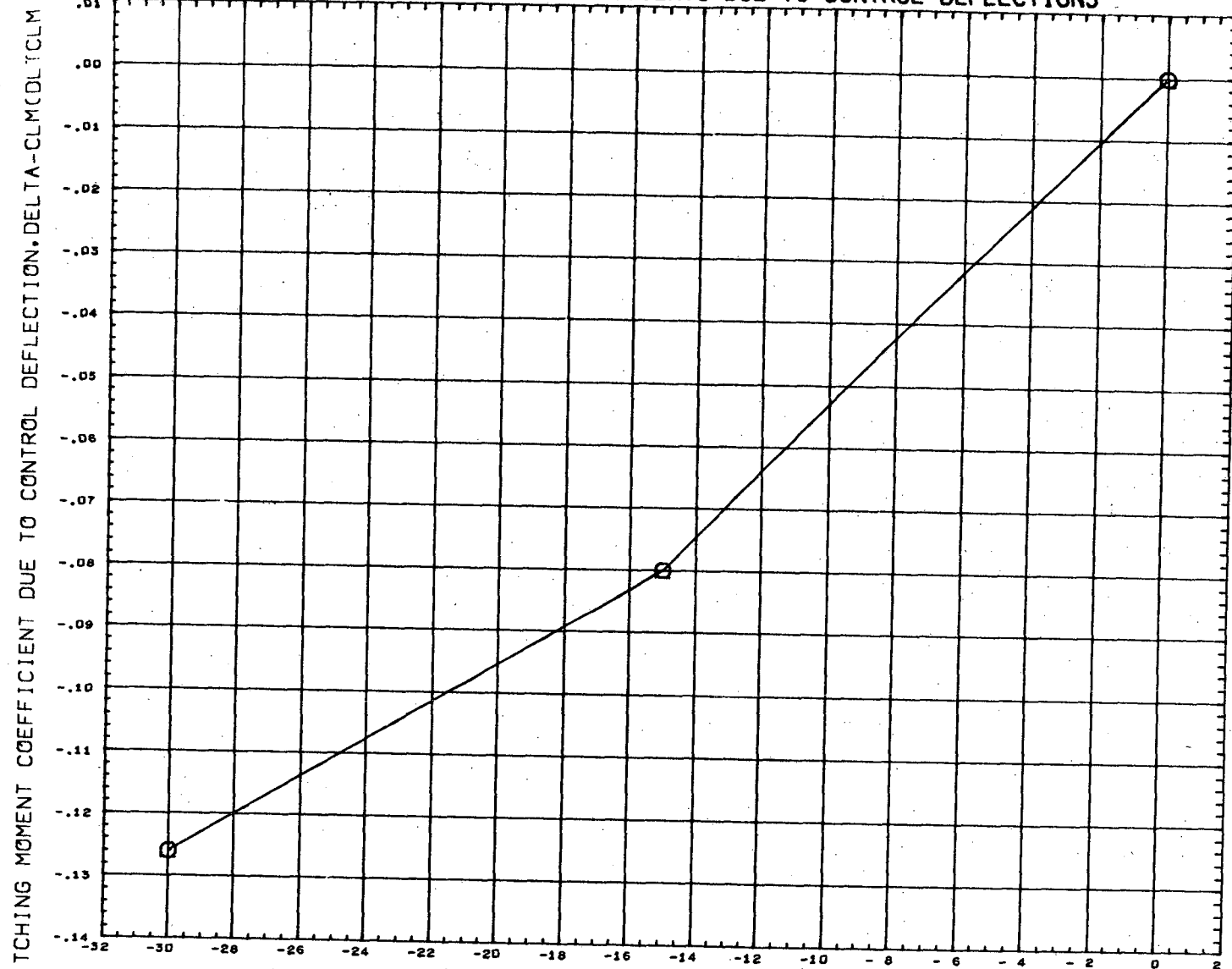


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTEND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
Q	23.000	MACH	0.900	BETA	0.000	DATASET	DLTCND	DATASET	DLTCND	SREF	14.9040	50. IN.	
		ELEVON	0.000	RUDDER	0.000	T35CAB	- 30.000	T35CAA	- 15.000	LREF	3.0120	IN.	
						T35EAO	0.000			BREF	6.0180	IN.	
										YMRP	7.2990	IN.	
										ZMRP	0.0000	IN.	
										SCALE	0.0035		
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DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

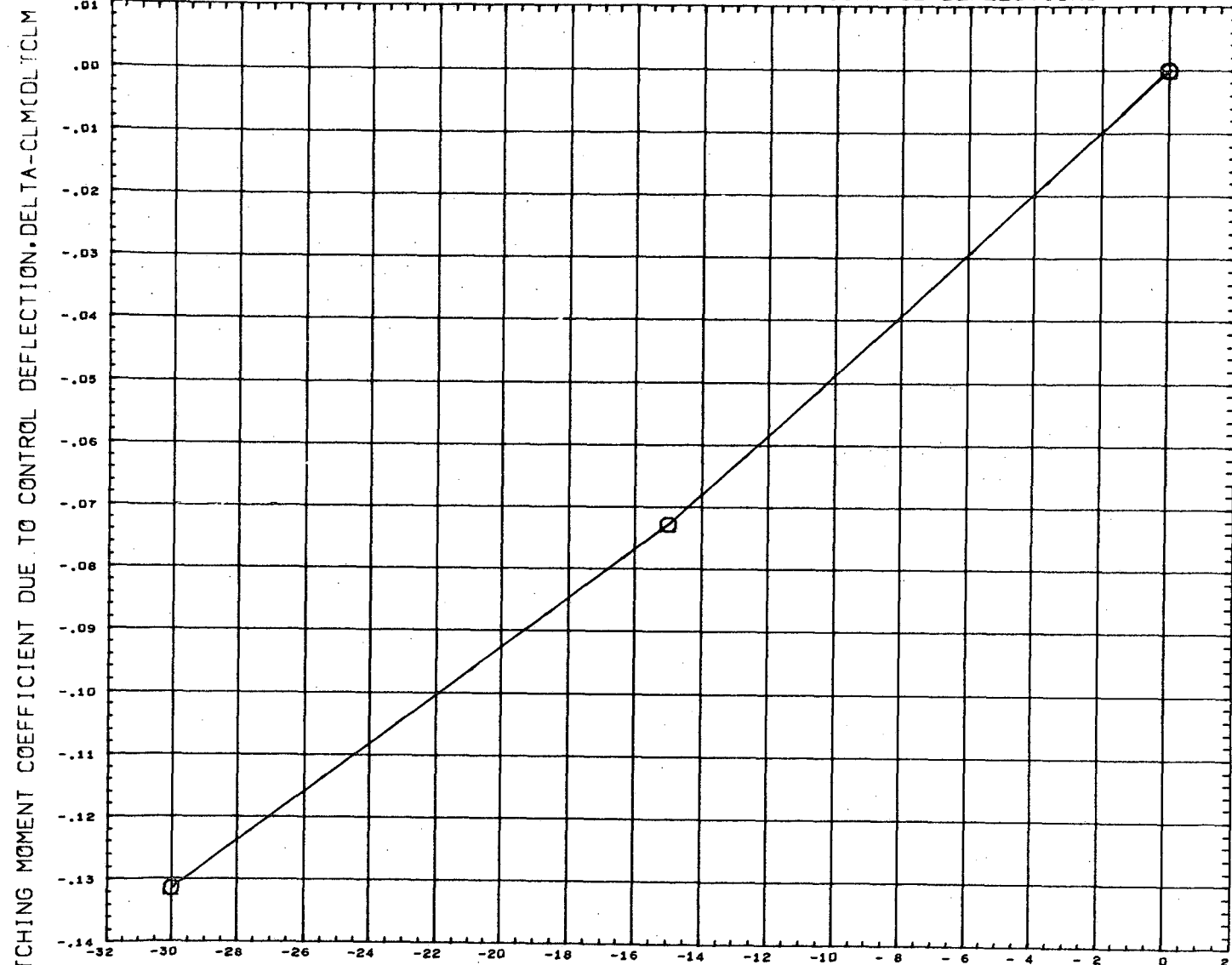


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	BETA	DATA SOURCE	DLTCND	DLTCND	REFERENCE INFORMATION	SREF	IN.
Q	5.000	ELEVON	1.200	0.000	T35CAB	-30.000	T35CAA	14.9040	59. IN.	
			0.000	0.000	T35EAO	0.000	-15.000	3.0120	IN.	
								6.0180	IN.	
								7.2990	IN.	
								0.0000	IN.	
								0.0000	IN.	
								0.0035	IN.	

DATA HIST. CODE I* C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

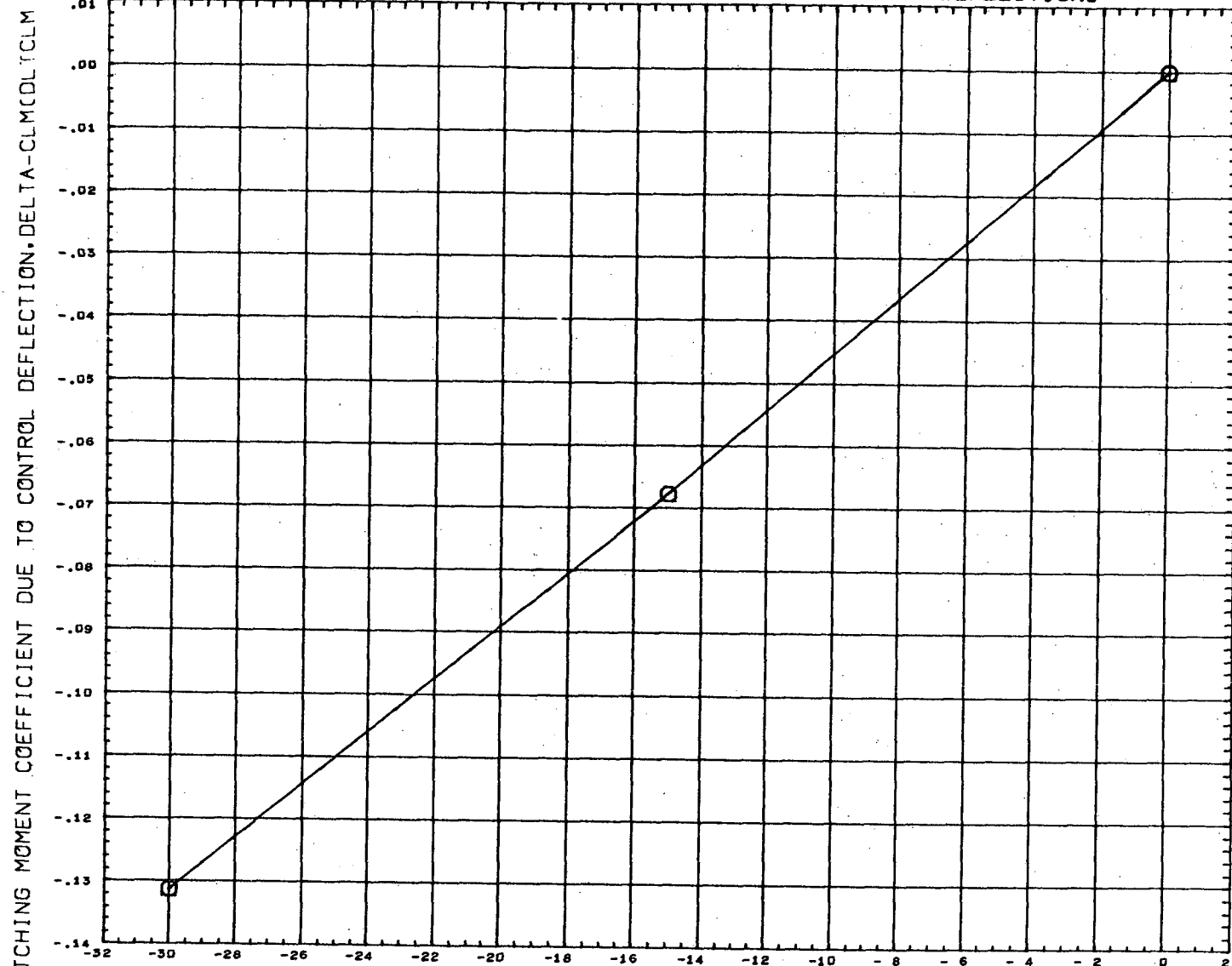


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTEND) DEGREES

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	BETA	DATA SOURCE	DLTEND	DLTEND	REFERENCE INFORMATION
Q	10.000	ELEVON	1.200	0.000	T35CAB	-30.000	T35CAA	14.9040 50. IN.
			0.000	0.000	T35EAO	0.000	-15.000	3.0120 IN.
								6.0180 IN.
								7.2990 IN.
								0.0000 IN.
								0.0000 IN.
								0.0035 IN.

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

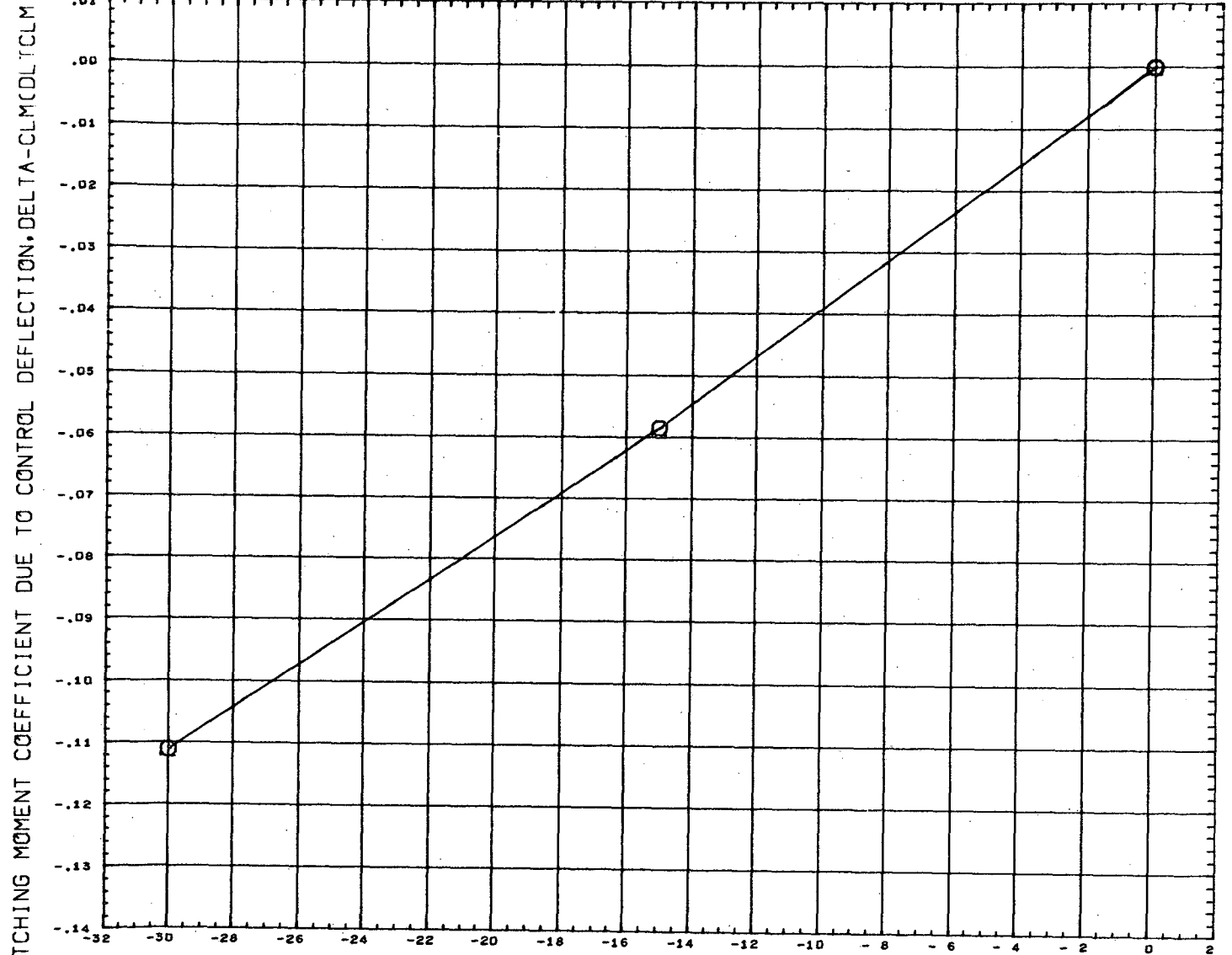


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	15.000	MACH 1.200 BETA 0.000	DLTCND	SREF 14.9040 SQ.IN.
		ELEVON 0.000 RUDDER 0.000	DLTCND	LREF 3.0120 IN.
			T35CAB - 30.000 T35CAA - 15.000	BREF 6.0180 IN.
			T35EAO 0.000	XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I+C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

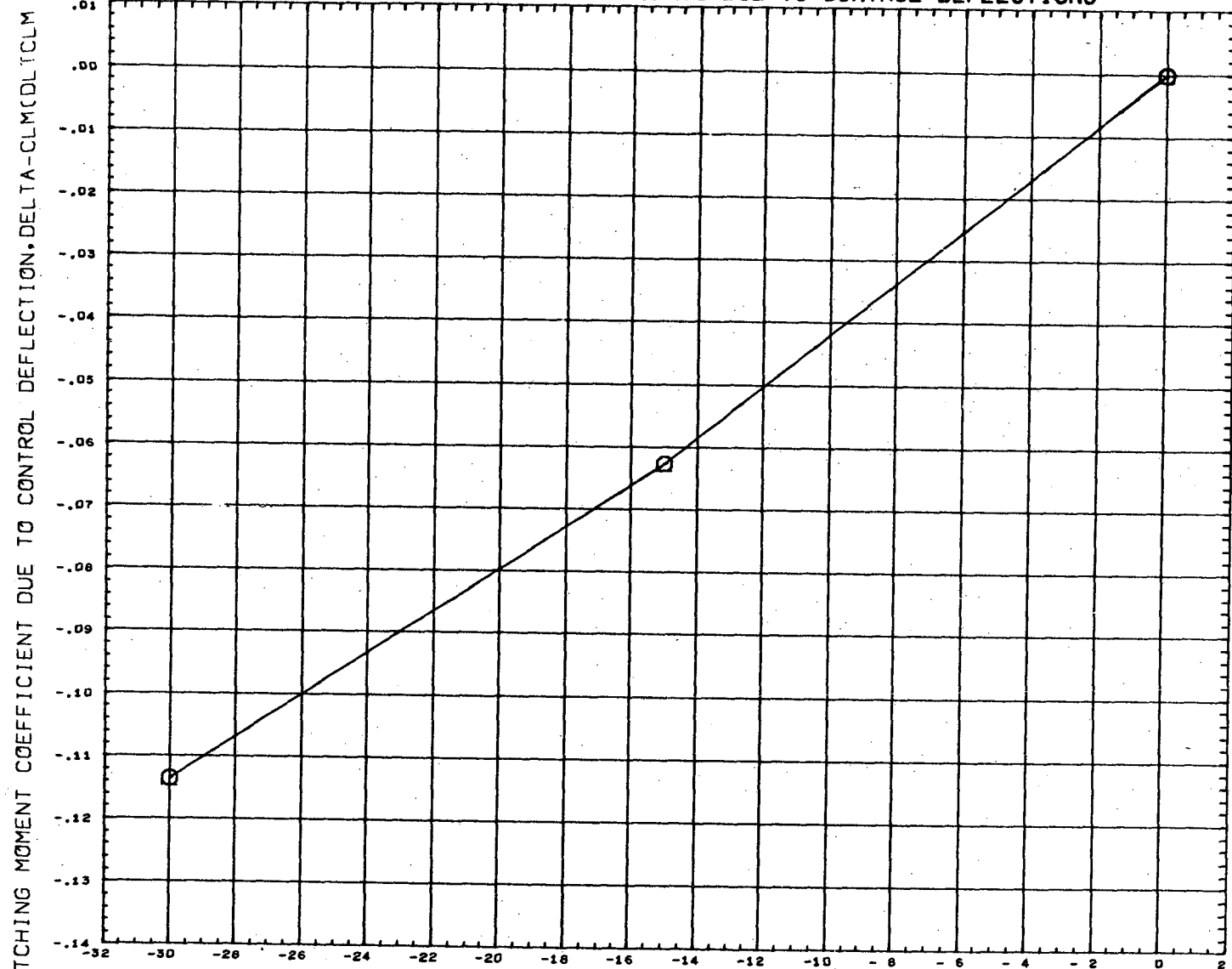


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	20.000	MACH 1.200 BETA 0.000	DLTCND	SREF 14.9040 SQ. IN.
		ELEVON 0.000 RUDDER 0.000	DLTCND	LREF 3.0120 IN.
			T35CAB - 30.000 T35CAA - 15.000	BREF 6.0180 IN.
			T35EAO 0.000	XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I+C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



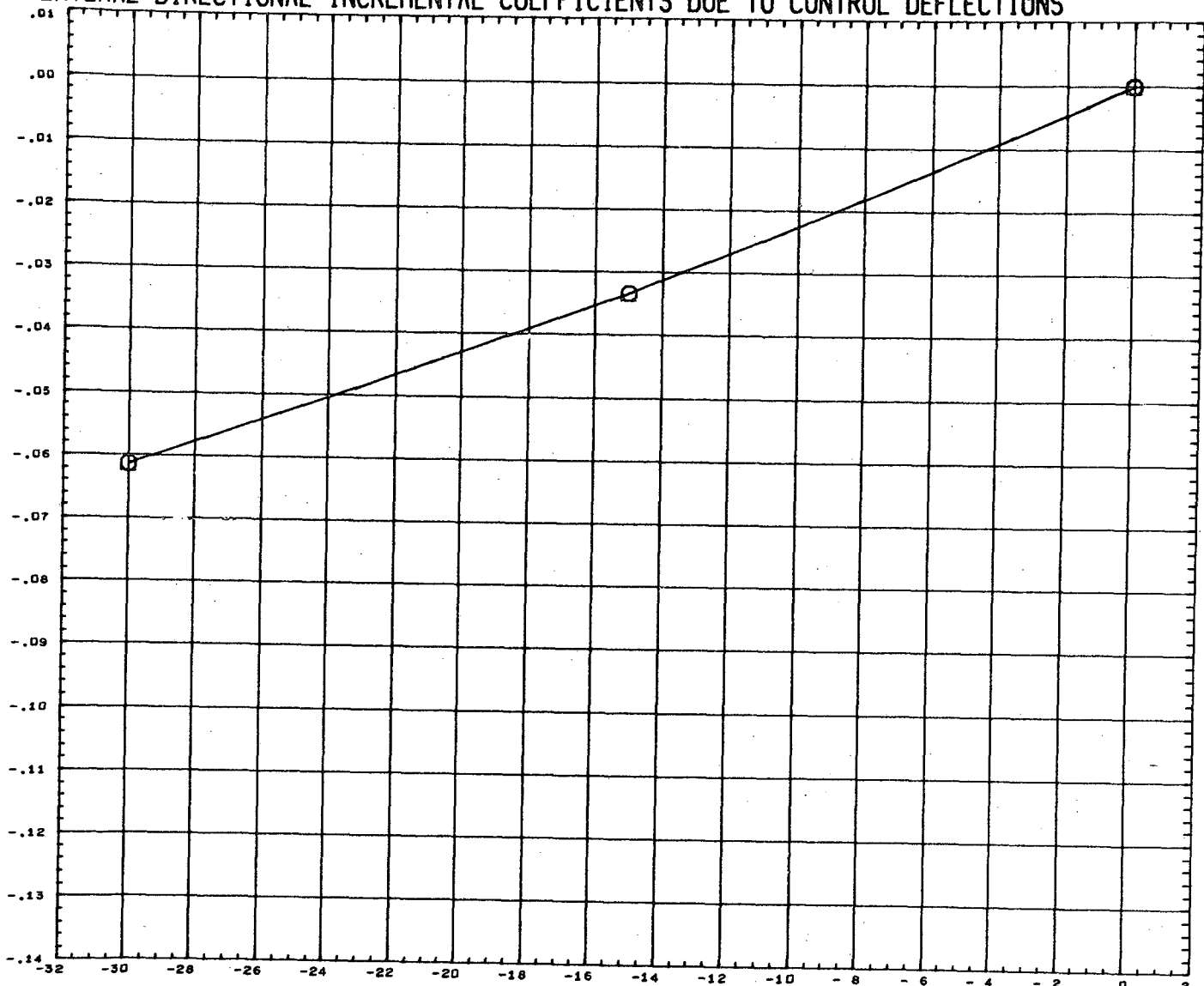
INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	25.000	MACH 1.200 BETA 0.000	DLTCND	SREF 14.9040 SQ. IN.
	ELEVON	0.000 RUDDER 0.000	T35CAB - 30.000 T35CAE - 15.000	LREF 3.0120 IN.
				BREF 6.0180 IN.
				XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I#C

PITCHING MOMENT COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CLMCDLTCM

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

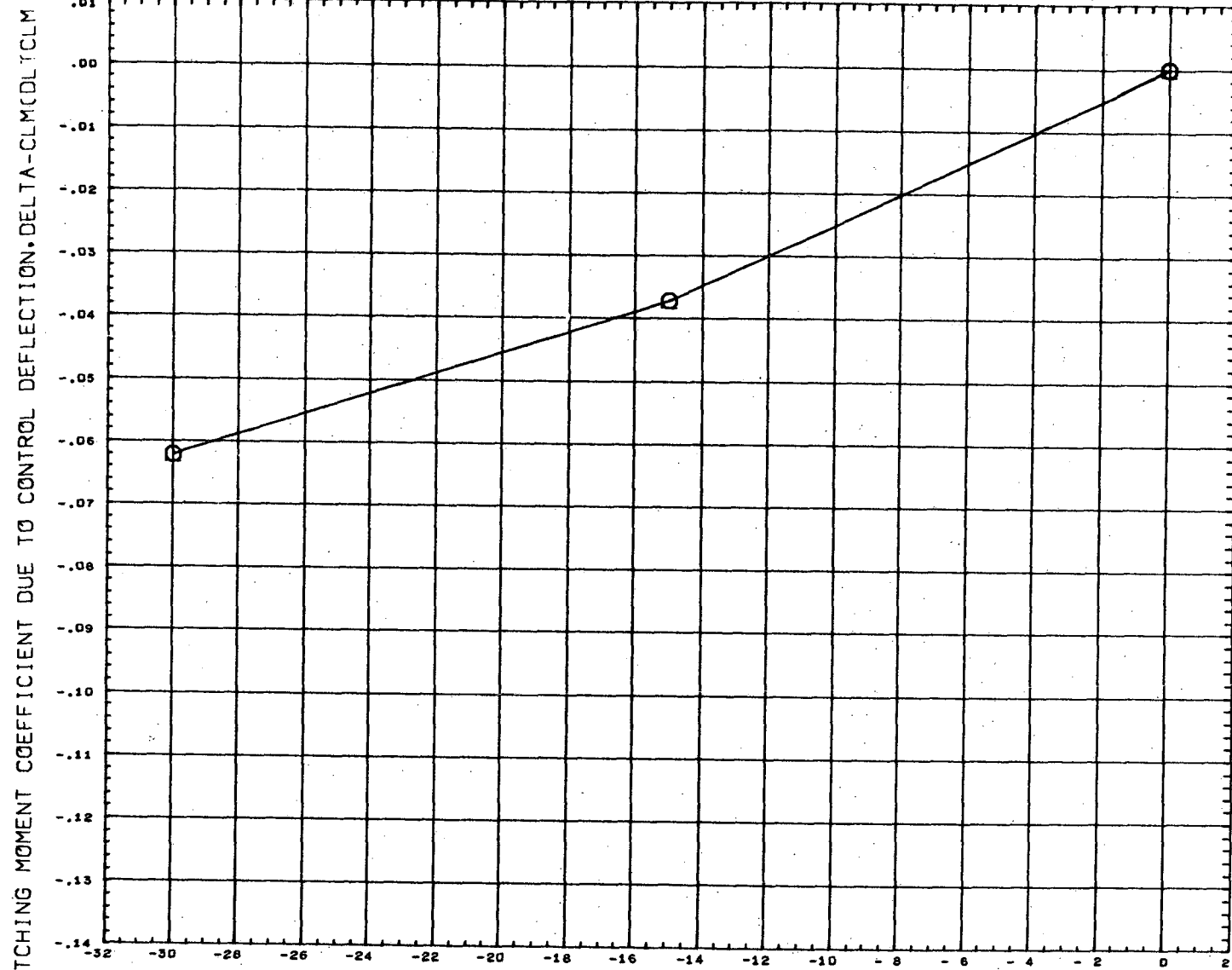


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
	ALPHA	BETA	DLTCND	DLTCND	SREF	50 IN.
O	5.000	2.000	0.000	0.000	14.9040	50 IN.
	ELEVON	0.000	0.000	0.000	LREF 3.0120	IN.
		RUDDER	0.000	0.000	BREF 6.0180	IN.
					XMRP 7.2990	IN.
					YMRP 0.0000	IN.
					ZMRP 0.0000	IN.
					SCALE 0.0035	

DATA HIST. CODE I*C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

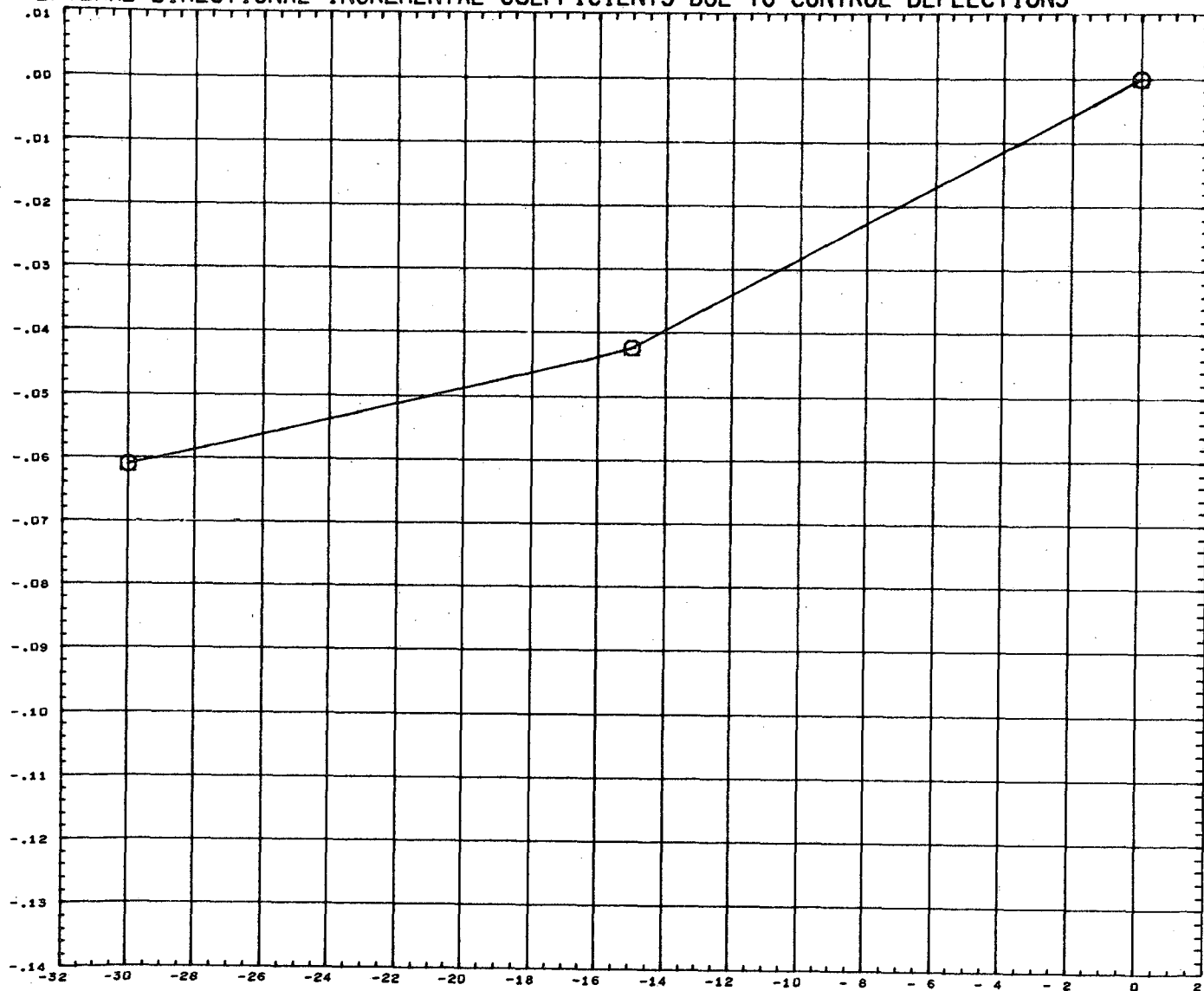
SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	10.000	MACH 2.000 BETA 0.000	DLTCND	SREF 14.9040 SQ. IN.
		ELEVON 0.000 RUDDER 0.000	T35CAB - 30.000 T35CAA - 15.000	LREF 3.0120 IN.
			T35EAO 0.000	BREF 6.0180 IN.
				XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I* C

C-10

DITCHING MOMENT COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CLMCDLCLM

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

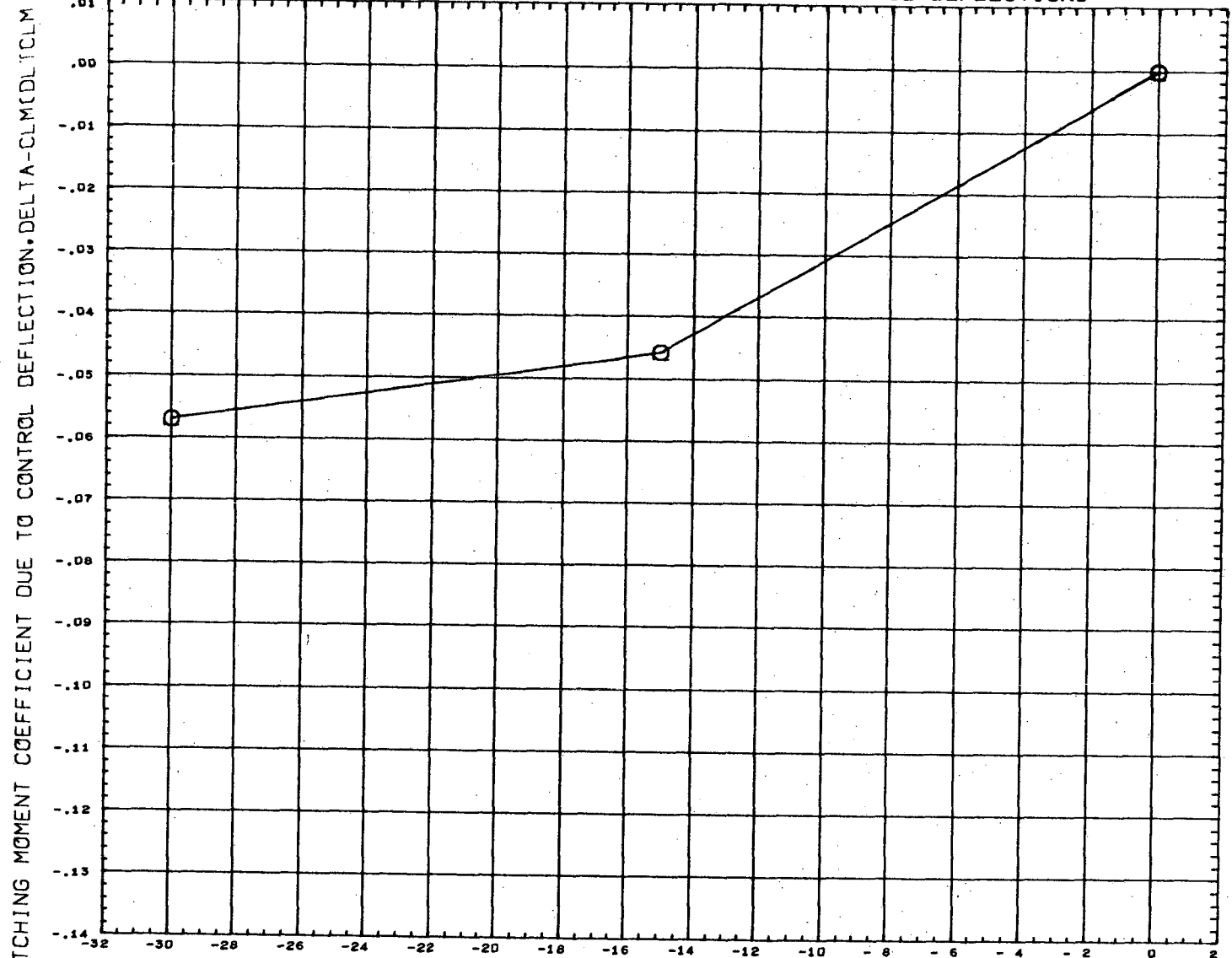


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
D	15.000	MACH 2.000 BETA 0.000	DLTCND	SREF 14.9040 SQ. IN.
		ELEVON 0.000 RUDDER 0.000	DLTCND	LREF 3.0120 IN.
			T35CAB - 30.000 T35CAA - 15.000	BREF 6.0180 IN.
			T35EAO 0.000	XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I*C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

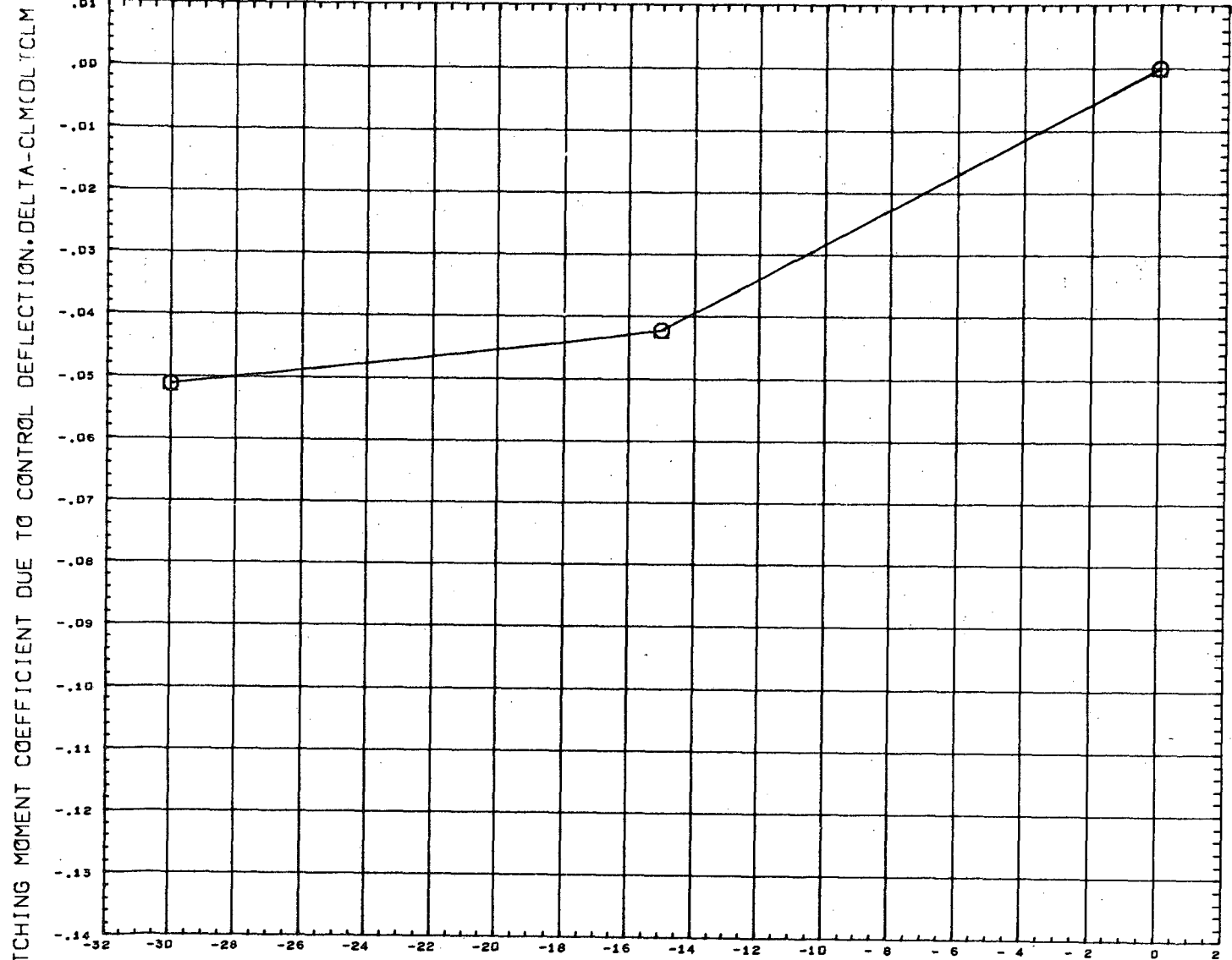


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	20.000	MACH 2.000 BETA 0.000	DATASET DLTCND	SREF 14.9040 SQ. IN.
		ELEVON 0.000 RUDDER 0.000	T35CAB - 30.000	LREF 3.0120 IN.
			T35EAO 0.000	BREF 6.0180 IN.
				XMRP 7.2990 IN.
				YMRP 0.0000 IN.
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				SCALE 0.0035

DATA HIST. CODE I* C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



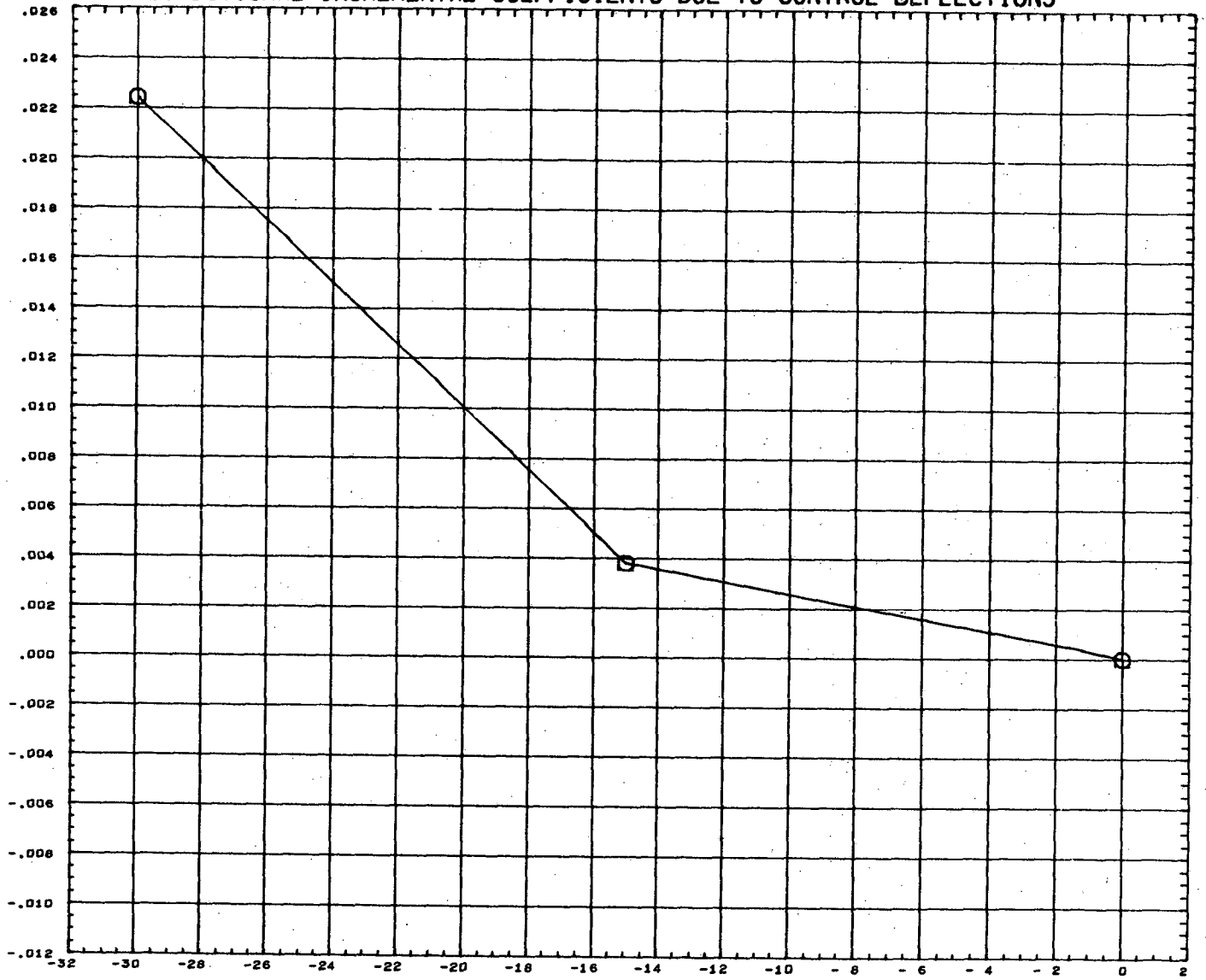
INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTEND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	23.000	MACH 2.000 BETA 0.000	DLTEND	SREF 14.9040 SQ. IN.
	ELEVON 0.000	RUDDER 0.000	T35CAB - 30.000 T35CAA - 15.000	LREF 3.0120 IN.
			T35EAO 0.000	BREF 6.0180 IN.
				XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I&C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)



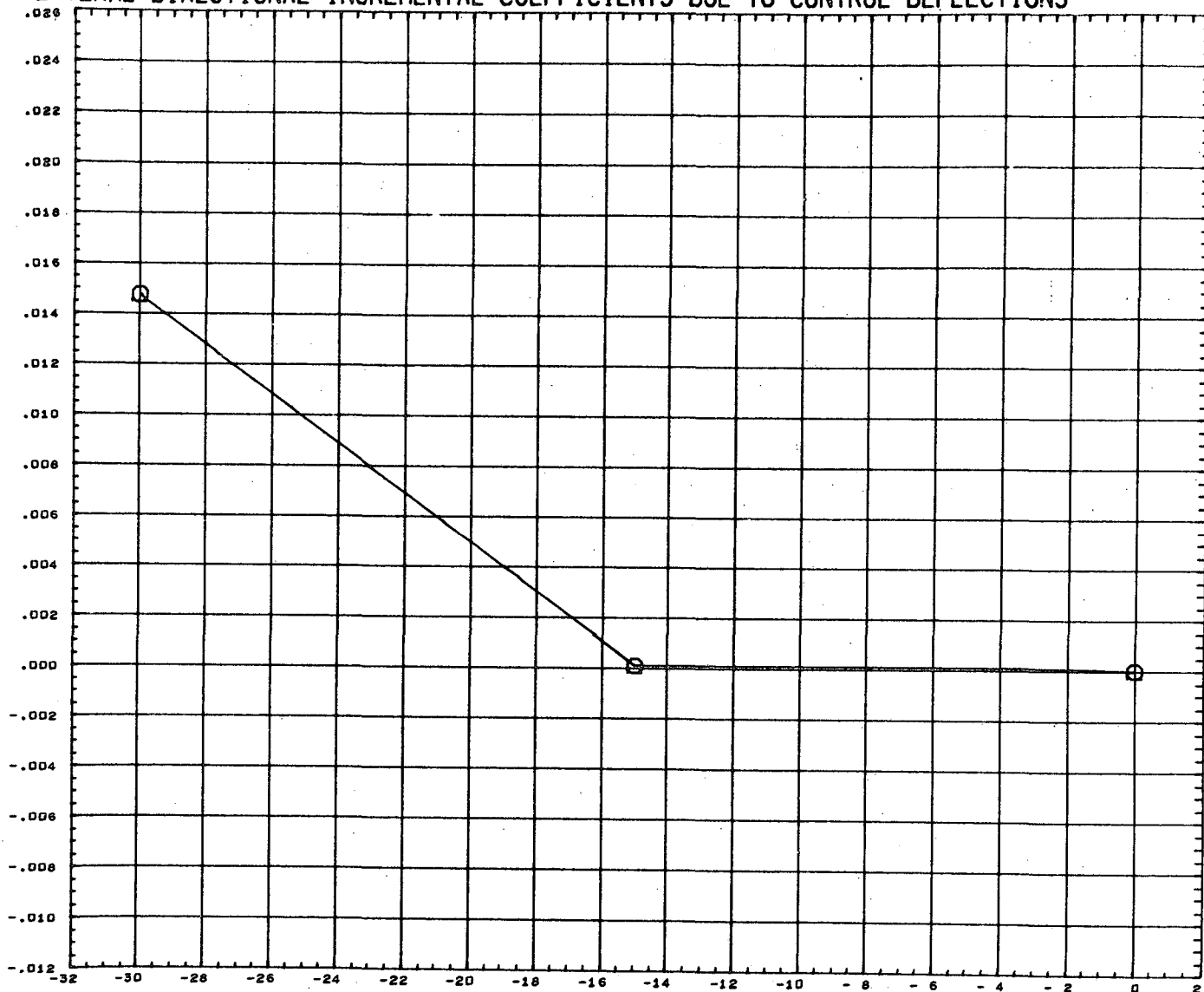
INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	5.000	MACH 0.900 BETA 0.000	DLTCND	SREF 14.9040 SQ. IN.
		ELEVON 0.000 RUDDER 0.000	DLTCND	LREF 3.0120 IN.
			T35CAB - 30.000 T35CAA - 15.000	BREF 6.0180 IN.
			T35EAO 0.000	XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)

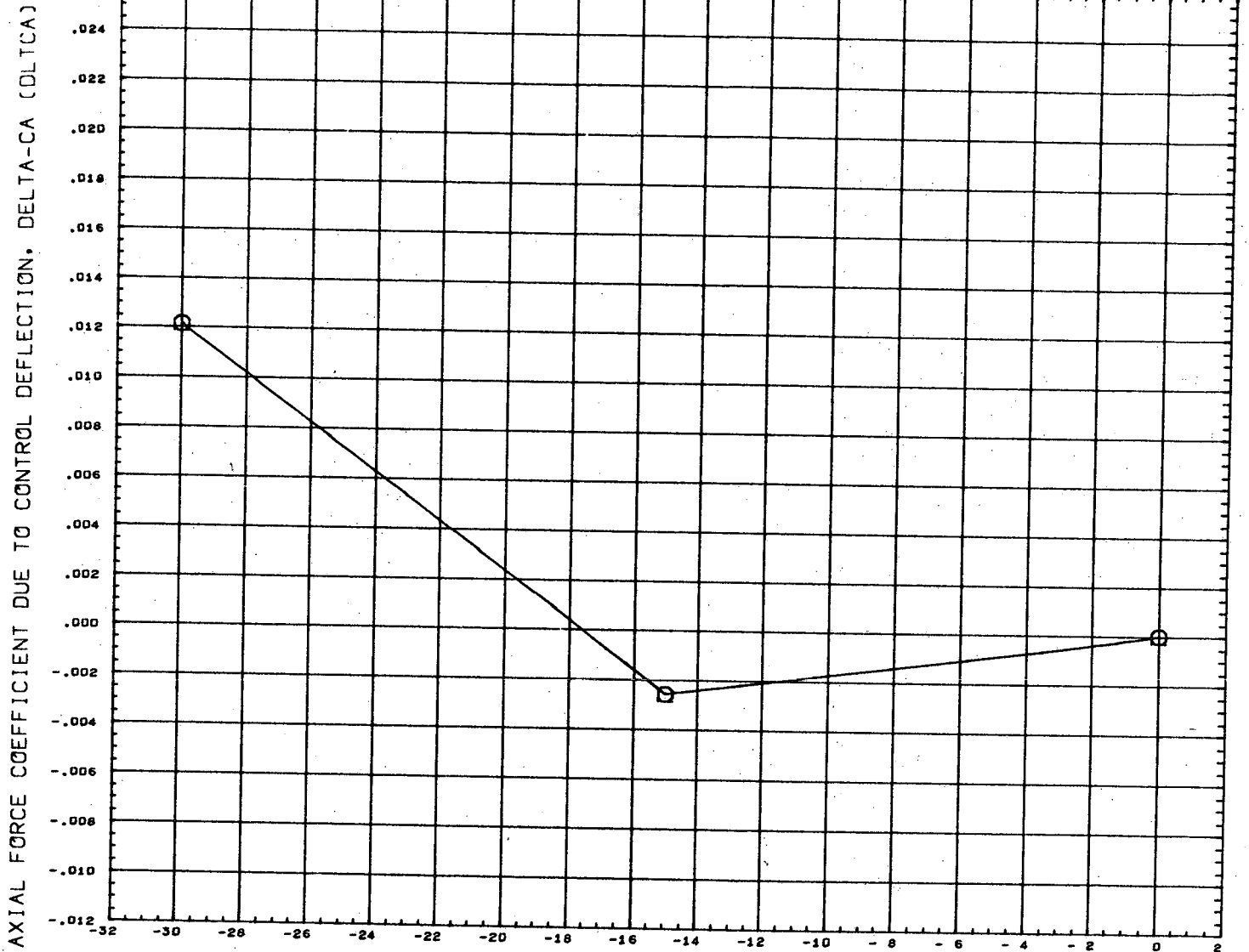


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTEND) DEGREES

SYMBOL	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
	ALPHA	MACH	BETA		DATASET	DLTEND	DATASET	DLTEND	SREF		SQ. IN.	
0	10.000	ELEVON	0.900	0.000	T35CAB	- 30.000	T35CAA	- 15.000	LREF	14.9040		
			0.000	0.000	T35EAO	0.000			BREF	3.0120	IN.	
									XMRP	6.0180	IN.	
									YMRP	7.2990	IN.	
									ZMRP	0.0000	IN.	
									SCALE	0.0035		

DATA HIST. CODE I+C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

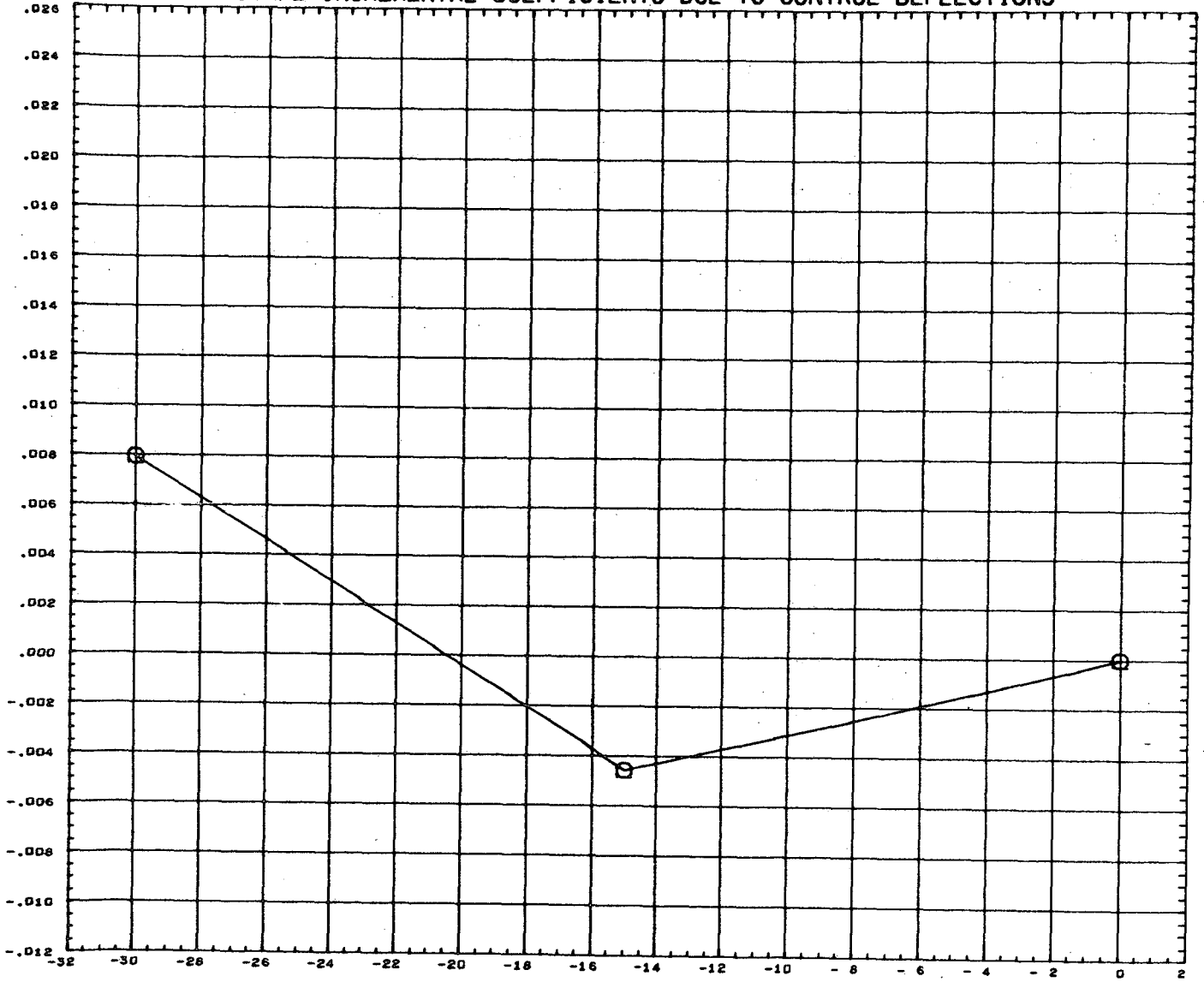


SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	15.000	MACH 0.900 BETA 0.000	DLTCND	SREF 14.9040 SQ.IN.
		ELEVON 0.000 RUDDER 0.000	DLTCND	LREF 3.0120 IN.
			T35CAB - 30.000	BREF 6.0180 IN.
			T35EAO 0.000	XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I* C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)

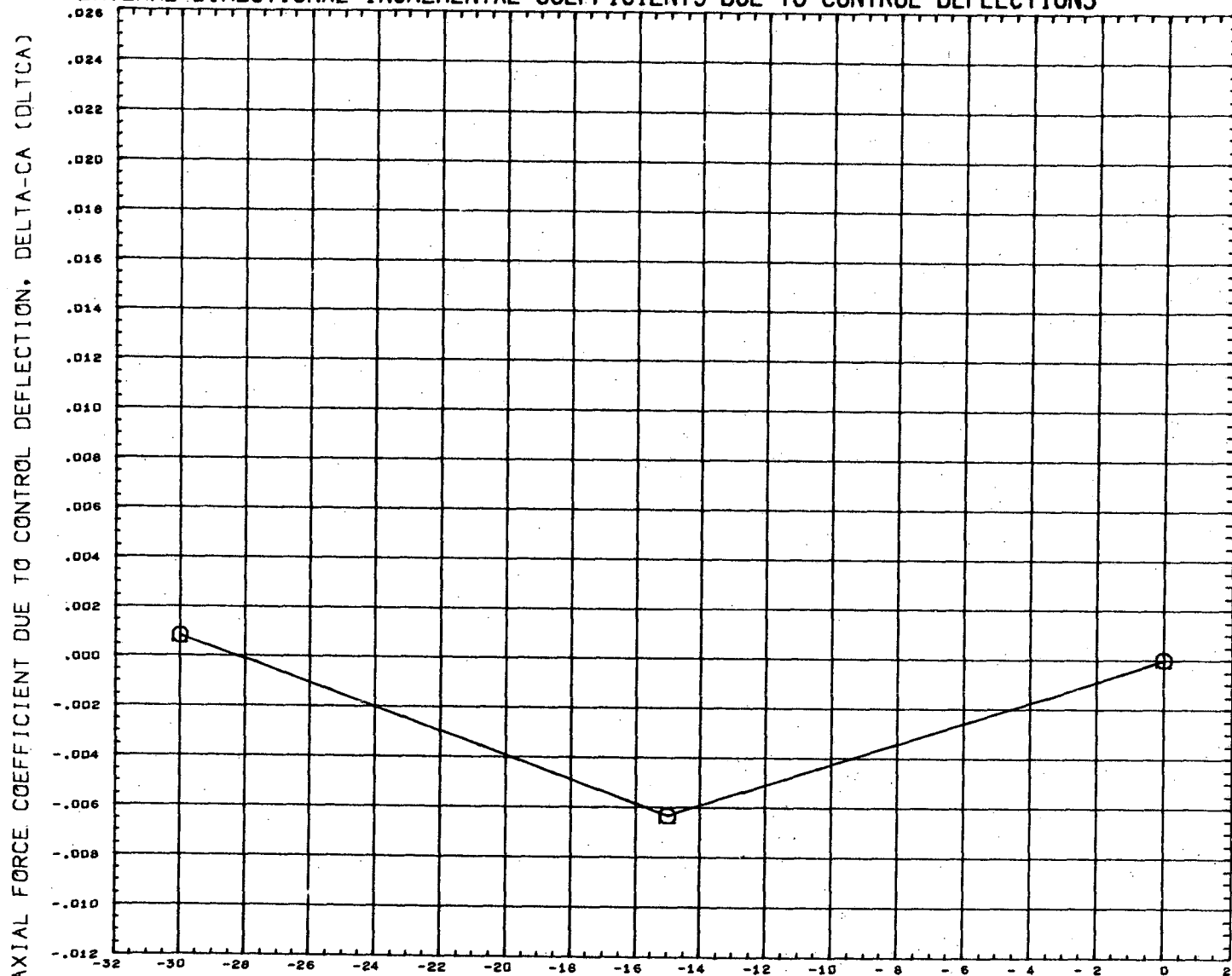


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
0	20.000	<u>MACH</u>	0.900	BETA	0.000	DATASET	DLTCND	DATASET	DLTCND	SREF	14.9040	SQ. IN.
		ELEVON	0.000	RUDDER	0.000	T35CAB	- 30.000	T35CAA	- 15.000	LREF	3.0120	IN.
						T35EAO	0.000			BREF	6.0180	IN.
										XMRP	7.2990	IN.
										YMRP	0.0000	IN.
										ZMRP	0.0000	IN.
										SCALE	0.0035	
		DATA HIST. CODE	1*	C								

DATA HIST. CODE I=C

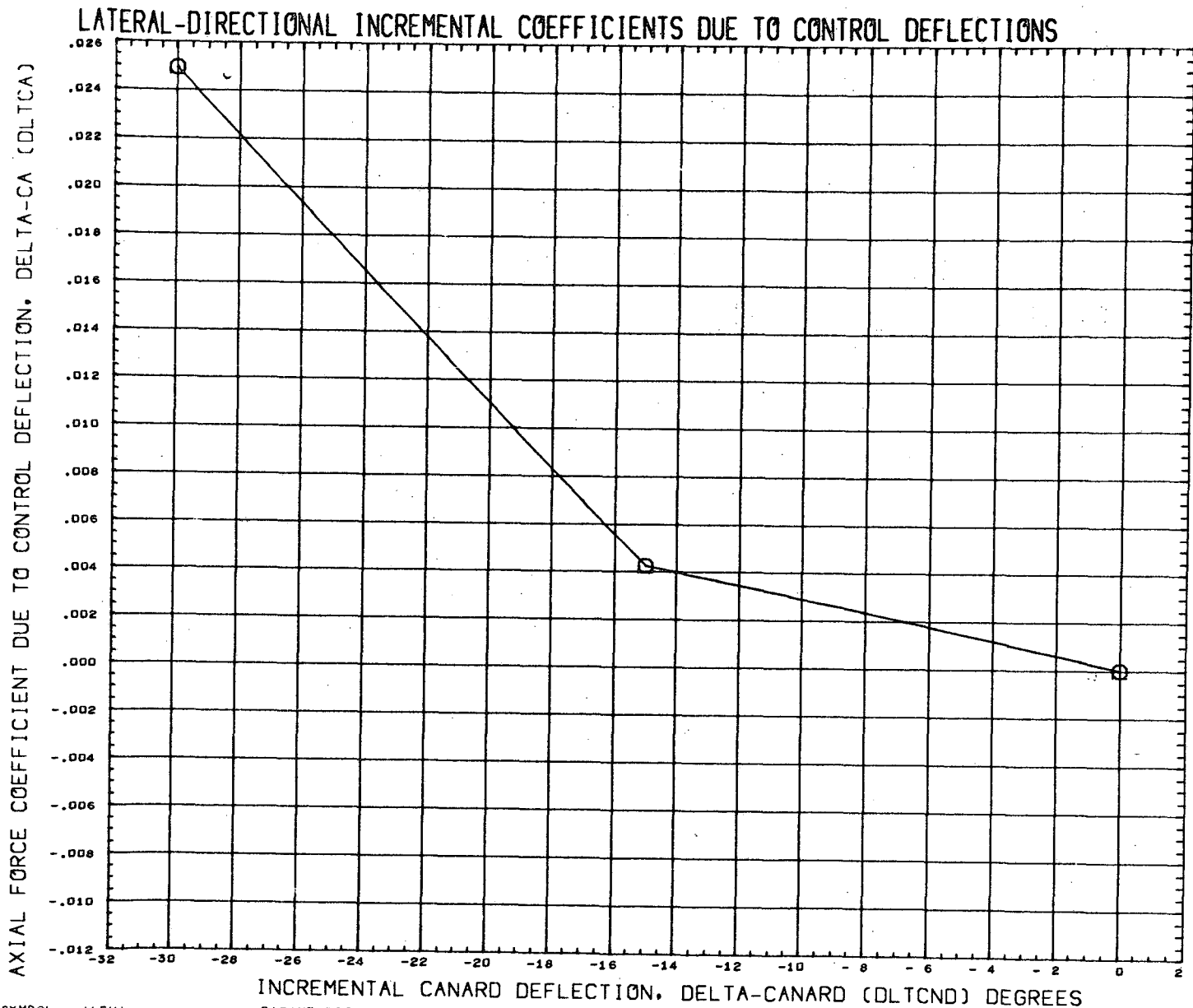
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	23.000	<u>MACH</u> 0.900 BETA 0.000	DLTCND	SREF 14.9040 SQ. IN.
	ELEVON	0.000 RUDDER 0.000	T35CAB - 30.000 T35CAA - 15.000	LREF 3.0120 IN.
			T35EAO 0.000	BREF 6.0180 IN.
				XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

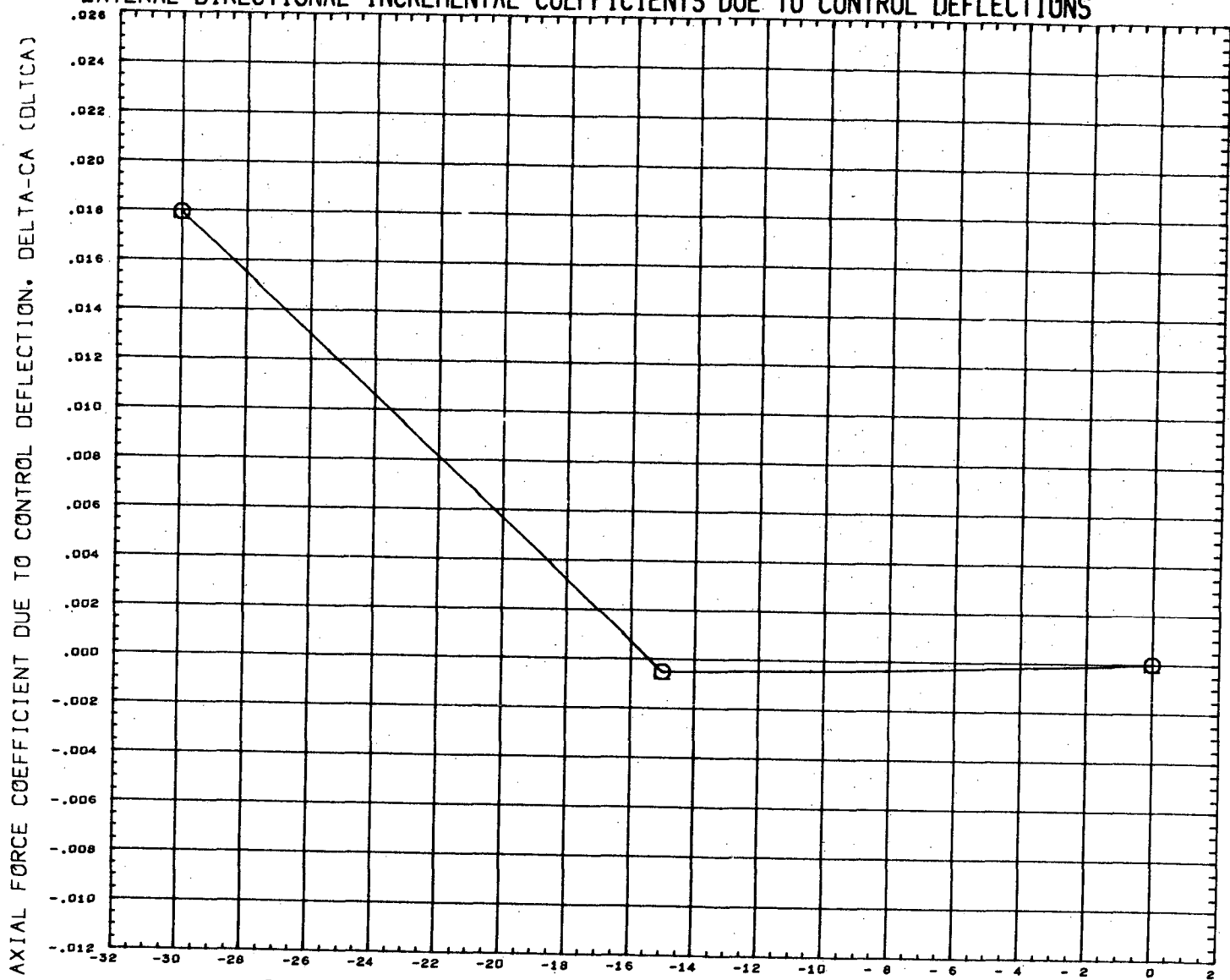
DATA HIST. CODE I#C



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
Q	5.000	MACH	1.200	BETA	0.000	DATASET	DLTCND	DATASET	DLTCND	SREF	14.9040	50. IN.	
		ELEVON	0.000	RUDDER	0.000	T35CAB	- 30.000	T35CAA	- 15.000	LREF	3.0120	IN.	
						T35EAO	0.000			BREF	6.0180	IN.	
										XMRP	7.2990	IN.	
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										ZMRP	0.0000	IN.	
										SCALE	0.0035		

DATA HIST. CODE I* C

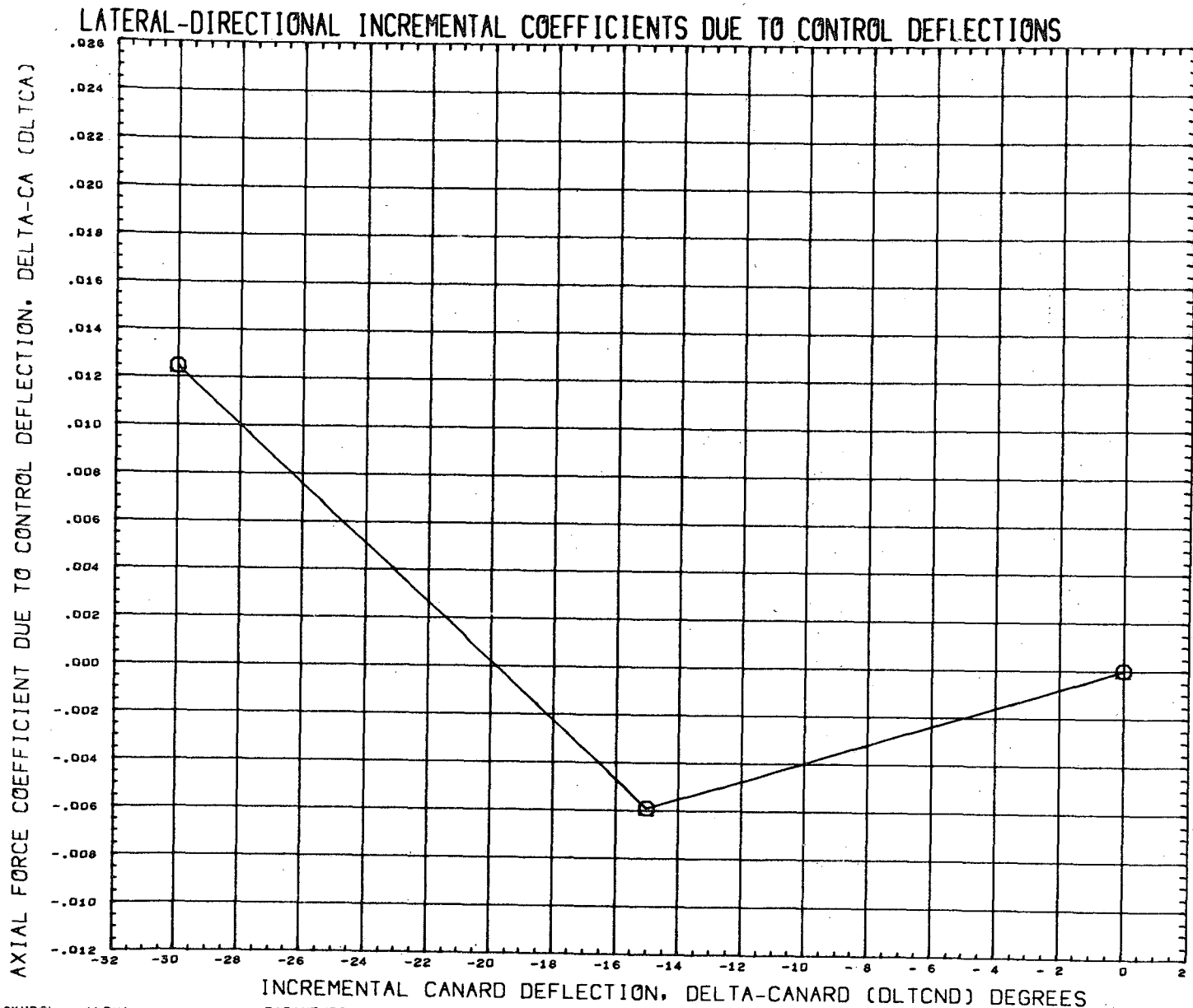
LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	10.000	MACH 1.200 BETA 0.000 DATASET DLTCND	T35CAB - 30.000 T35CAO 0.000	SREF 14.9040 SQ. IN.
	ELEVON	0.000 RUDDER 0.000 DATASET DLTCND	T35CAA - 15.000	LREF 3.0120 IN.
				BREF 6.0180 IN.
				XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE 1*0

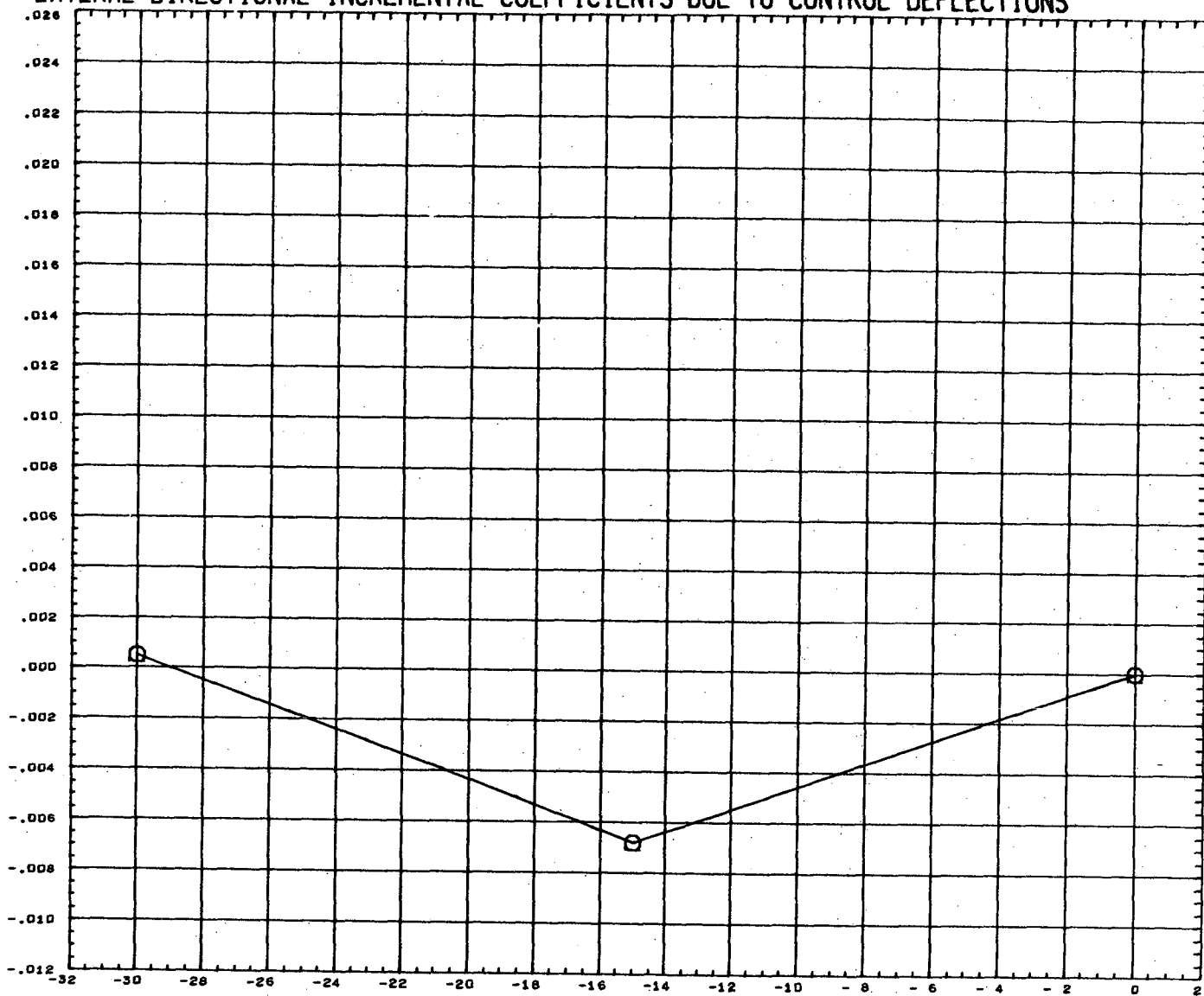


SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
	15.000	MACH	1.200	BETA	0.000	DATASET	DLTCND	DATASET	DLTCND	SREF	14.9040	SQ. IN.	
Q		ELEVON	0.000	RUDDER	0.000	T35CAB	- 30.000	T35CAA	- 15.000	LREF	3.0120	IN.	
						T35EAO	0.000			BREF	6.0180	IN.	
										XMRF	7.2990	IN.	
										YMRP	0.0000	IN.	
										ZMRP	0.0000	IN.	
										SCALE	0.0035		

DATA HIST. CODE I*C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

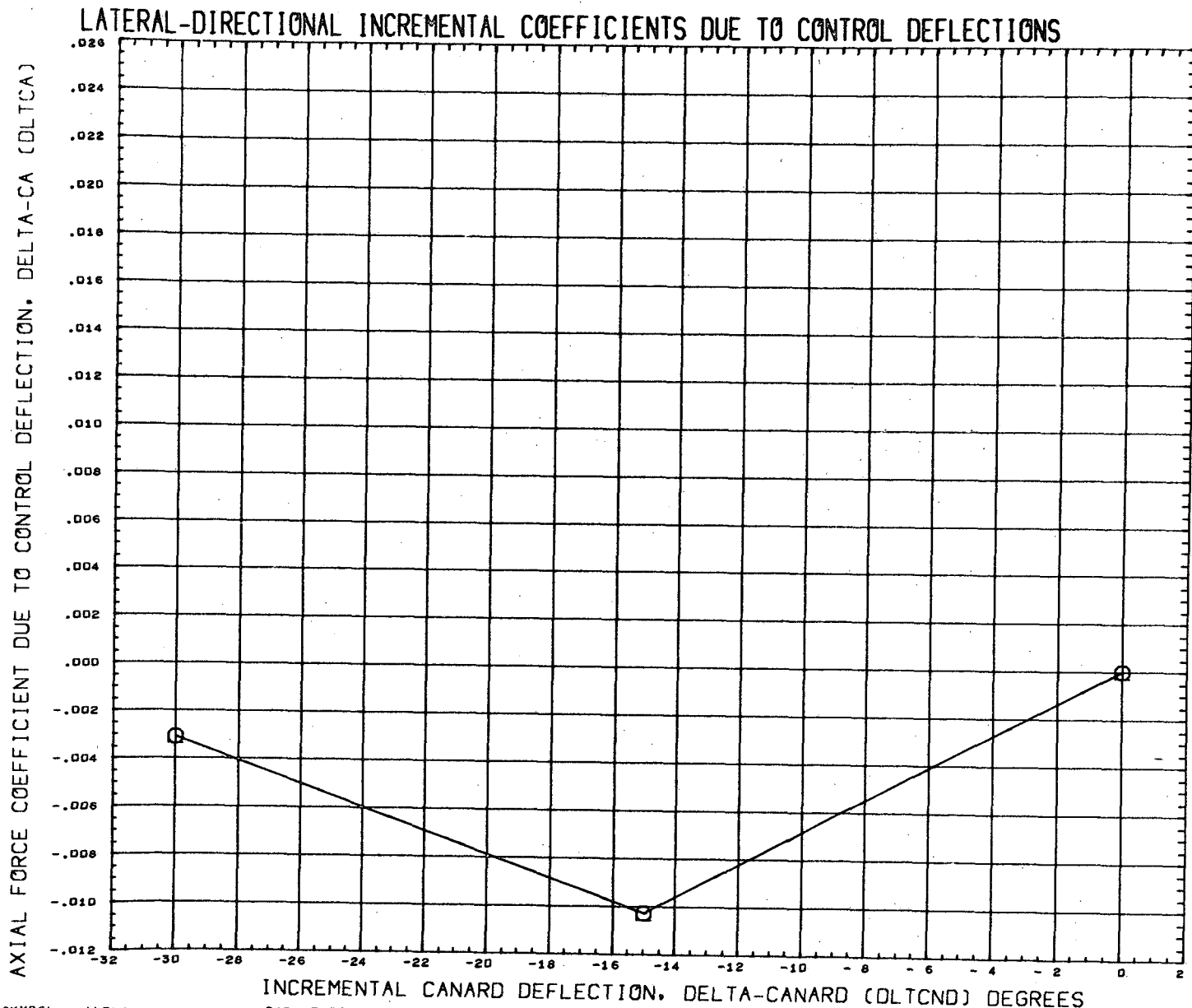
AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)



INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
D	20.000	MACH	1.200	BETA	0.000	DATASET	DLTCND	DATASET	DLTCND	SREF	14.9040	50. IN.	
		ELEVON	0.000	RUDDER	0.000	T35CAB	- 30.000	T35CAA	- 15.000	LREF	3.0120	IN.	
						T35EAO	0.000			BREF	6.0180	IN.	
										XMRF	7.2990	IN.	
									YMRF	0.0000	IN.		
									ZMRF	0.0000	IN.		
									SCALE	0.0035			
		DATA HIST. CODE		I* C									

DATA HIST. CODE I*C

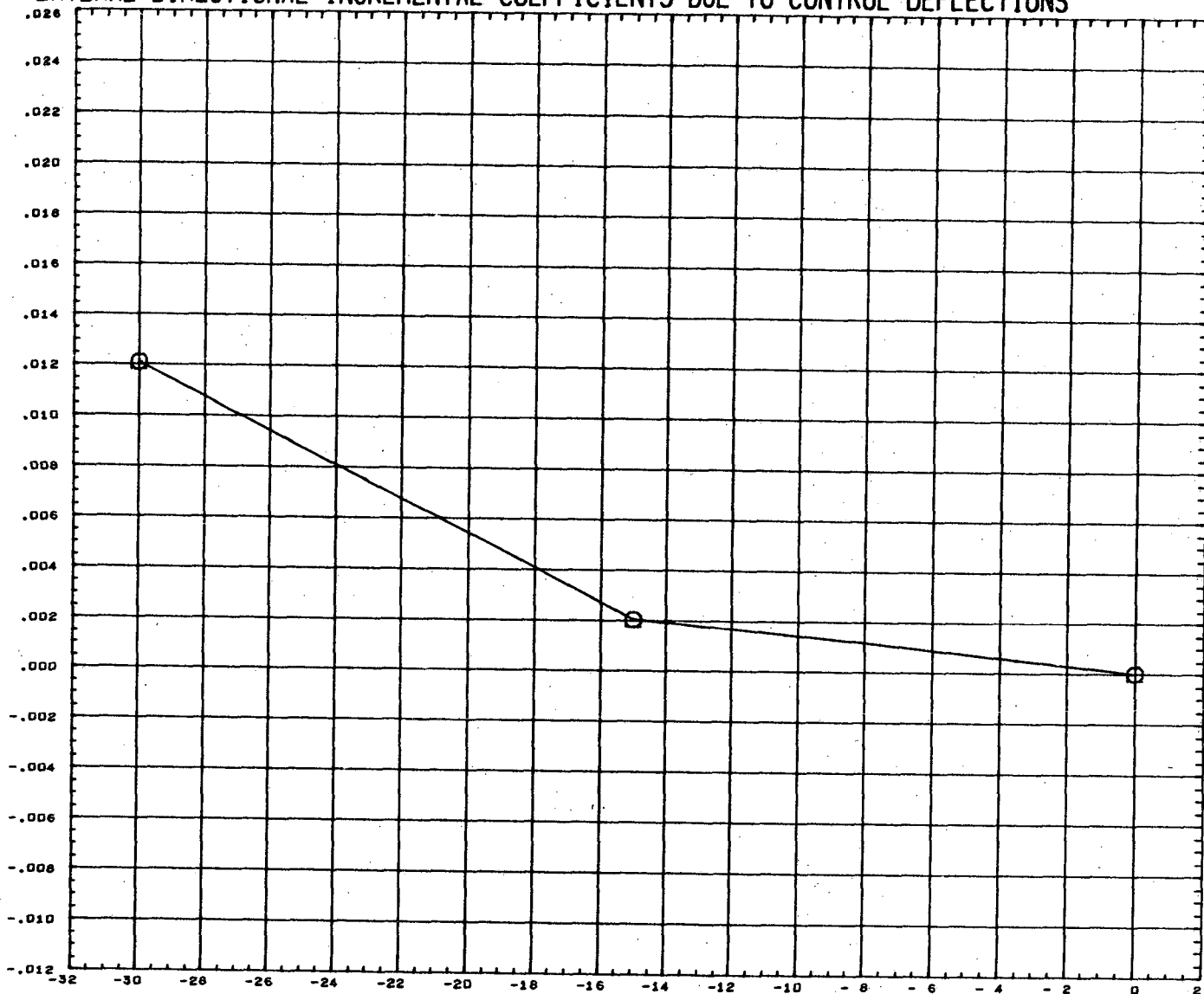


SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	23.000	MACH	1.200	BETA	0.000	DLTCND	SREF 14.9040 SQ. IN.
		ELEVON	0.000	RUDDER	0.000	DLTCND	LREF 3.0120 IN.
							BREF 6.0180 IN.
							XMRF 7.2990 IN.
							YMRF 0.0000 IN.
							ZMRF 0.0000 IN.
							SCALE 0.0035

DATA HIST. CODE 1*0

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)



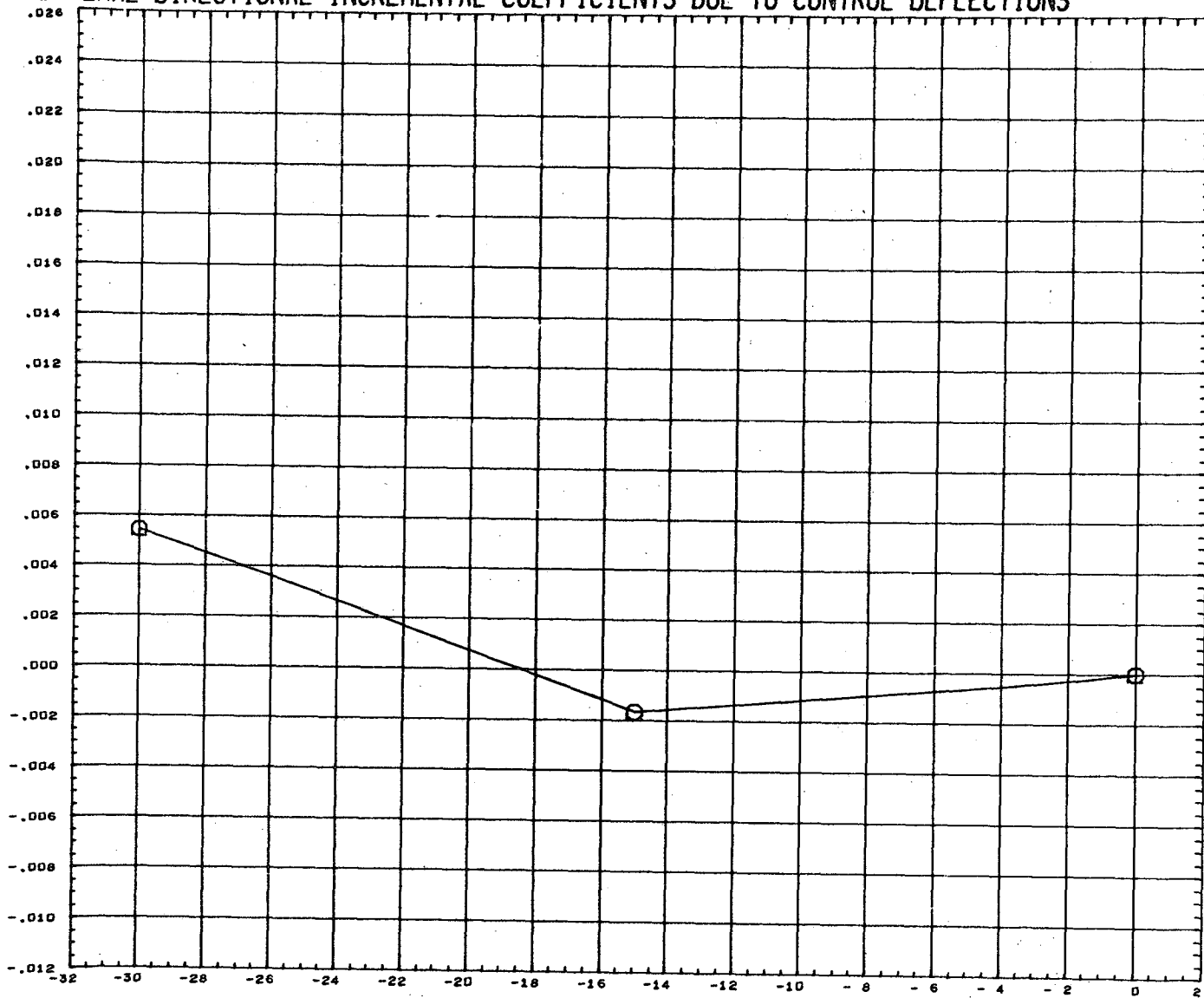
INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	5.000	MACH 2.000 BETA 0.000	DLTCND	SREF 14.9040 SQ. IN.
		ELEVON 0.000 RUDDER 0.000	DLTCND	LREF 3.0120 IN.
			T35CAB - 30.000	BREF 6.0180 IN.
			T35EAO 0.000	XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I* C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)

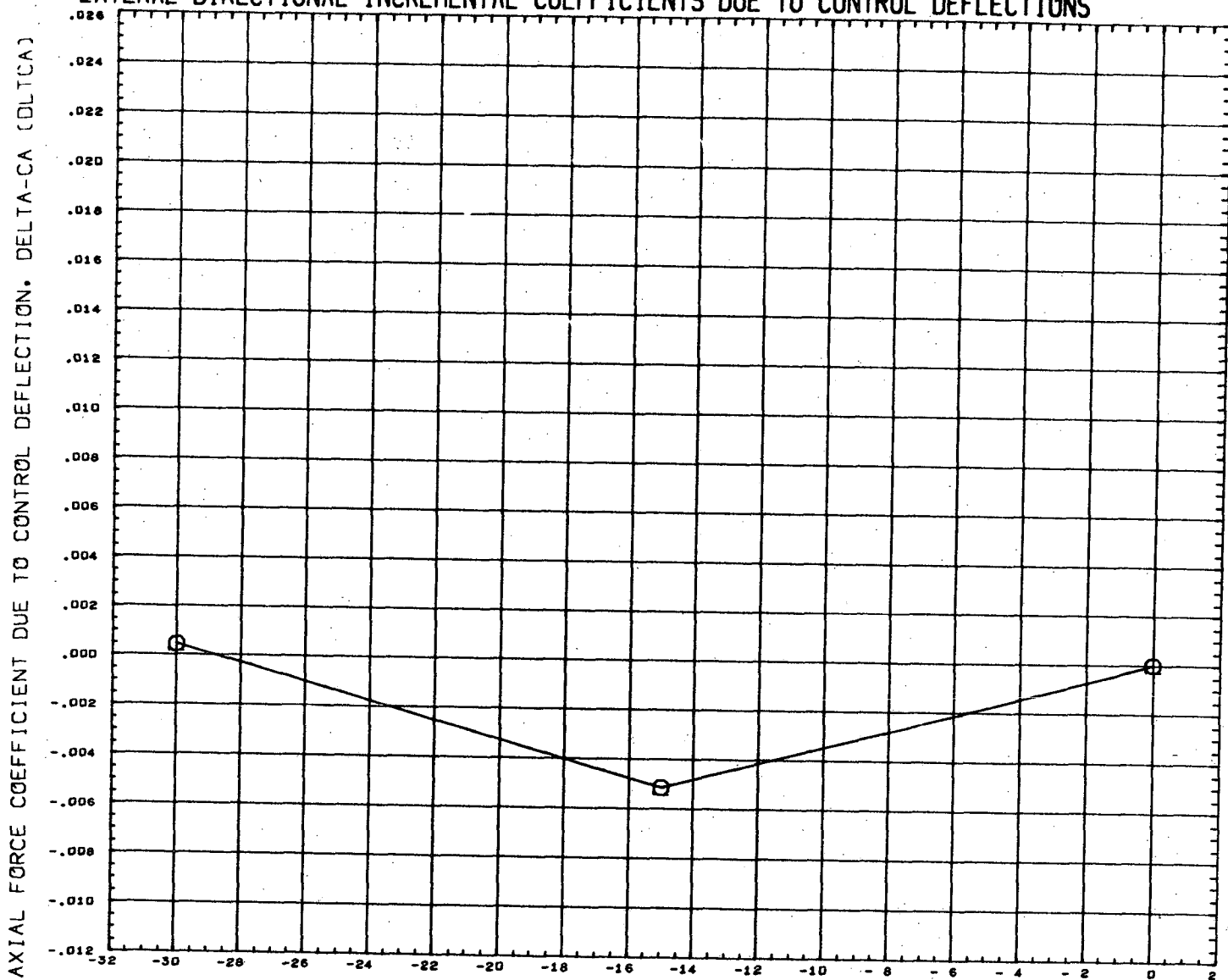


INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	MACH	ELEVON	PARAMETRIC VALUES	BETA	RUDDER	DATA SOURCE	DLTCND	DLTCA	DLTCND	DLTCA	SREF	14.9040	SQ. IN.
○	10.000			2.000	0.000	0.000	T35CAB	-30.000	T35CAA	-15.000		LREF	3.0120	IN.
				0.000	0.000	0.000	T35EAO	0.000				BREF	6.0180	IN.
												XMRP	7.2990	IN.
												YMRP	0.0000	IN.
												ZMRP	0.0000	IN.
												SCALE	0.0035	IN.

DATA HIST. CODE 1+C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS



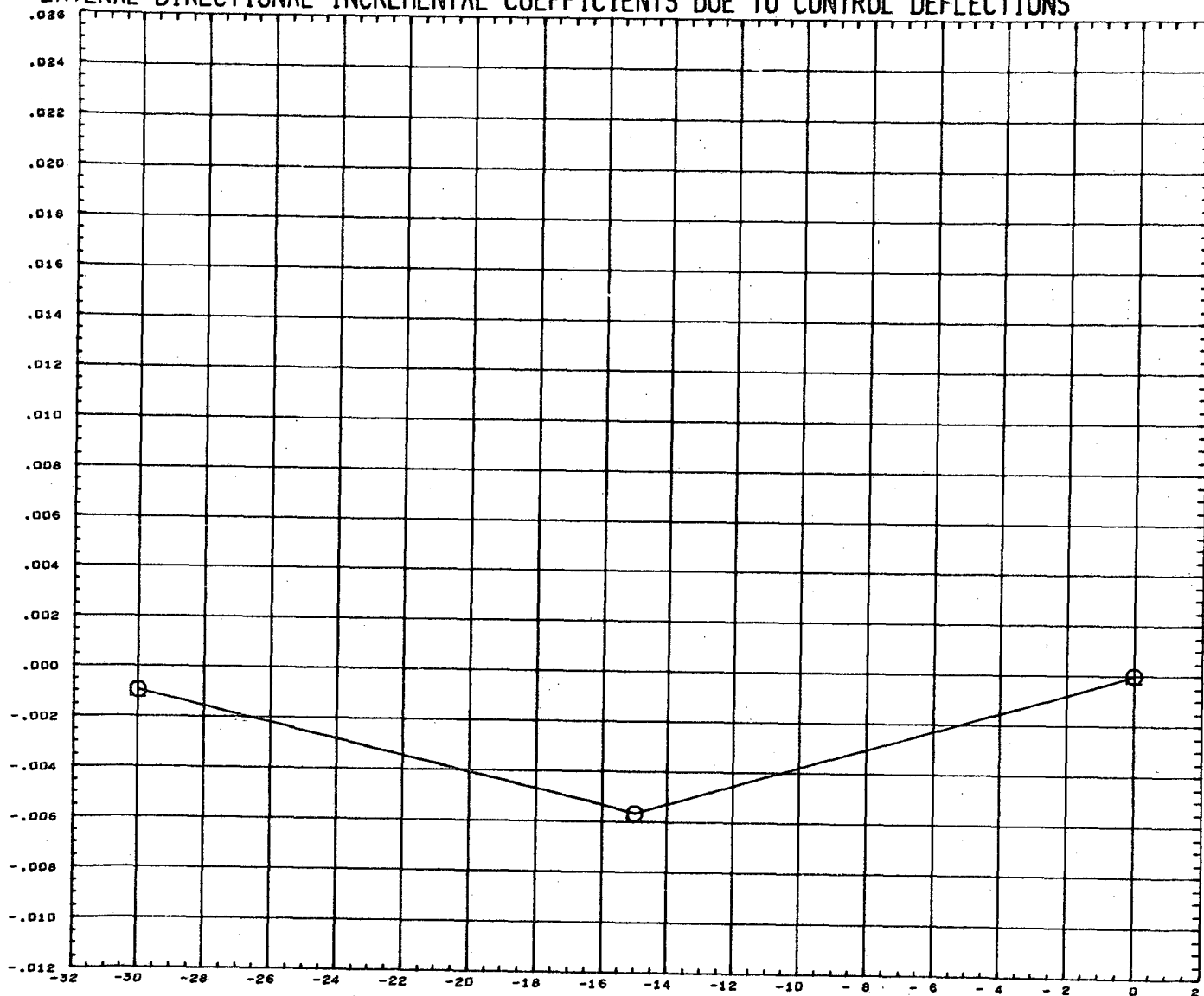
INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	BETA	DATA SOURCE	DLTCND	DLTCND	REFERENCE INFORMATION	
Q	15.000	ELEVON	2.000	0.000	T35CAB	-30.000	T35CAA	14.9040	50. IN.
			0.000	0.000	T35EAO	0.000	-15.000	3.0120	IN.
								6.0180	IN.
								7.2990	IN.
								0.0000	IN.
								0.0000	IN.
								0.0035	

DATA HIST. CODE I#C

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)



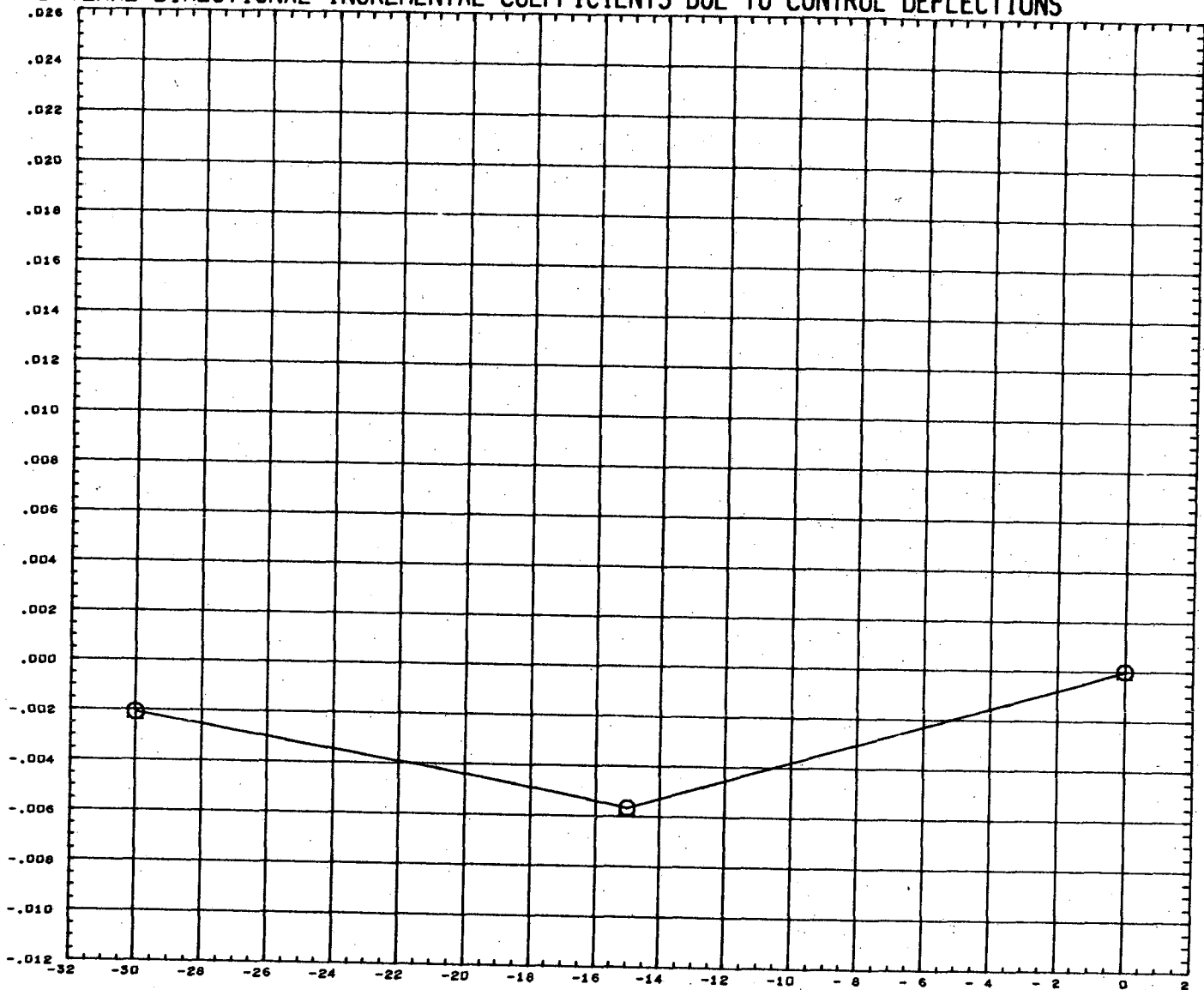
INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	20.000	MACH 2.000 BETA 0.000	DATA SOURCE	SREF 14.9040 SQ. IN.
		ELEVON 0.000 RUDDER 0.000	DATASET DLTCND DATASET DLTCND	LREF 3.0120 IN.
			T35CAB - 30.000 T35CAA - 15.000	BREF 6.0180 IN.
			T35EAO 0.000	XMRP 7.2990 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0035

DATA HIST. CODE I*0

LATERAL-DIRECTIONAL INCREMENTAL COEFFICIENTS DUE TO CONTROL DEFLECTIONS

AXIAL FORCE COEFFICIENT DUE TO CONTROL DEFLECTION, DELTA-CA (DLTCA)



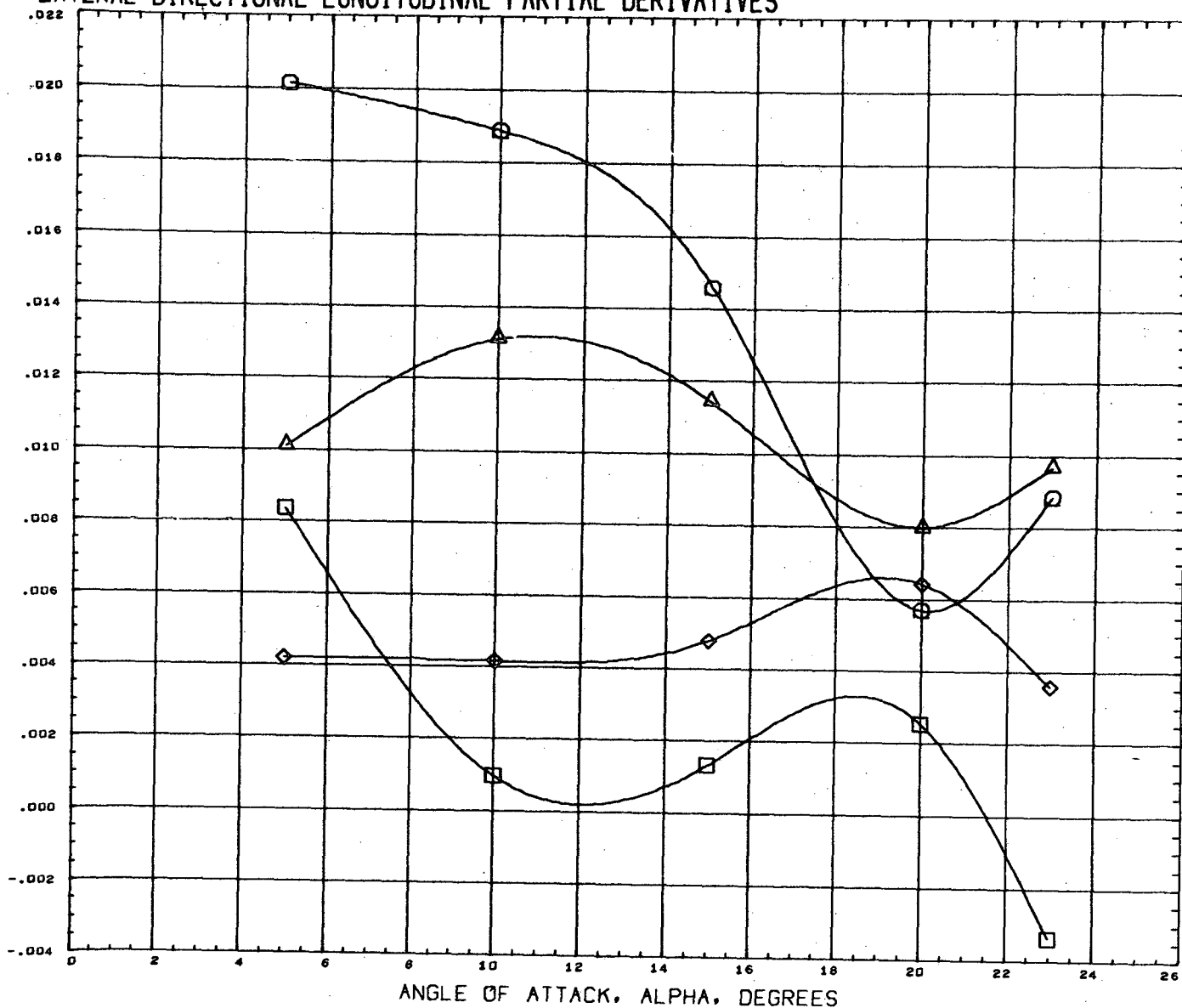
INCREMENTAL CANARD DEFLECTION, DELTA-CANARD (DLTCND) DEGREES

SYMBOL	ALPHA	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
Q	23.000	MACH 2.000 BETA 0.000	DLTCND	SREF 14.9040 SQ. IN.
		ELEVON 0.000 RUDDER 0.000	DLTCND	LREF 3.0120 IN.
			DLTCND	BREF 6.0180 IN.
			DLTCND	XMRP 7.2990 IN.
			DLTCND	YMRP 0.0000 IN.
			DLTCND	ZMRP 0.0000 IN.
			DLTCND	SCALE 0.0035

DATA HIST. CODE 1*0

ELEVATOR NORMAL FORCE EFFECTIVENESS. DCN/DELEVATOR (DCN/DE) PER DEG.

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(X35EAA) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0
 (X35EAO) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0
 (X35EAC) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0
 (X35EAB) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0

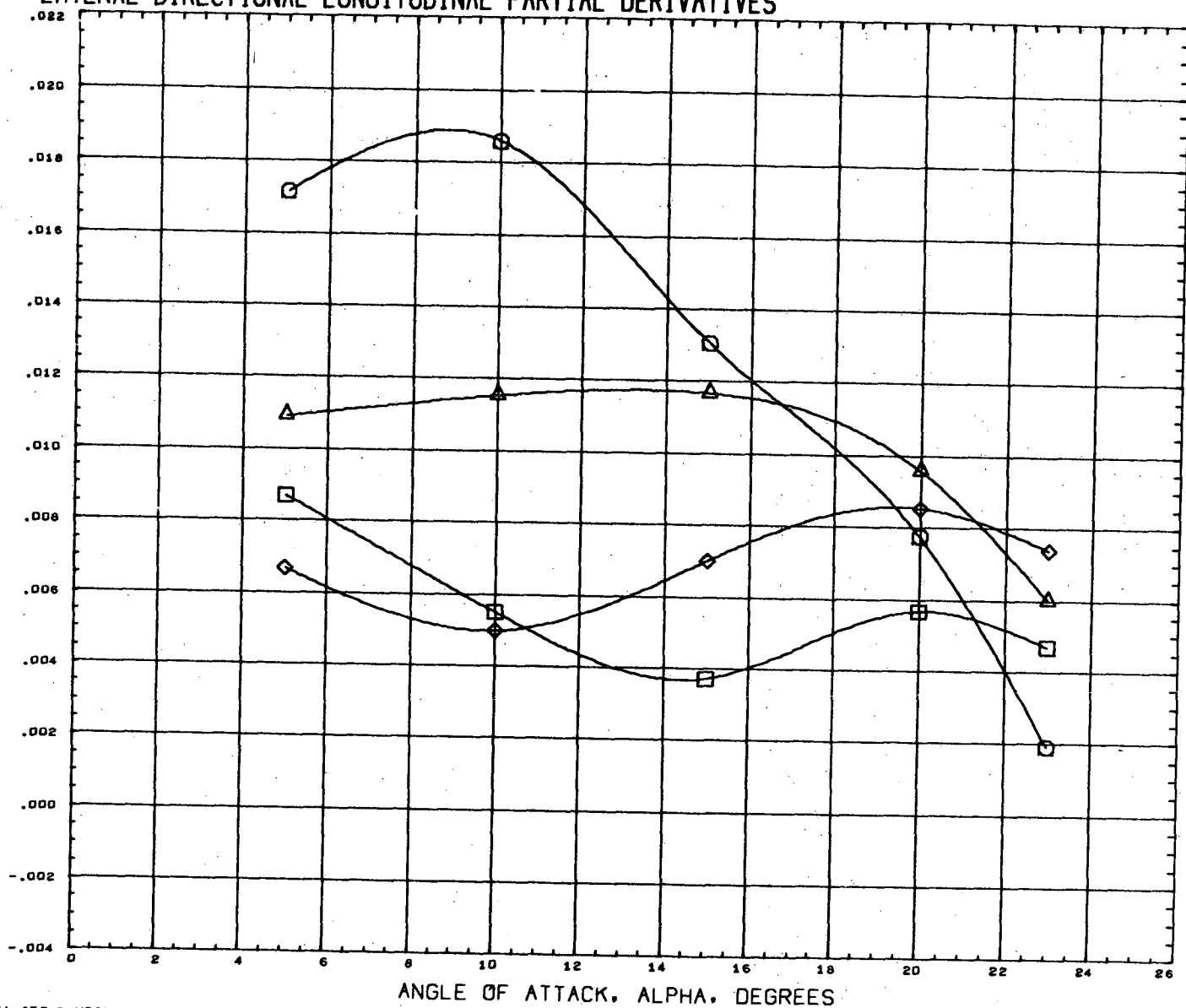
BETA ELEVON CANARD RUDDER
 0.000 10.000 0.000 0.000
 0.000 0.000 0.000 0.000
 0.000 -10.000 0.000 0.000
 0.000 -20.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ.IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 0.900

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES

ELEVATOR NORMAL FORCE EFFECTIVENESS, DCN/DELEVATOR (DCN/DE) PER DEG.

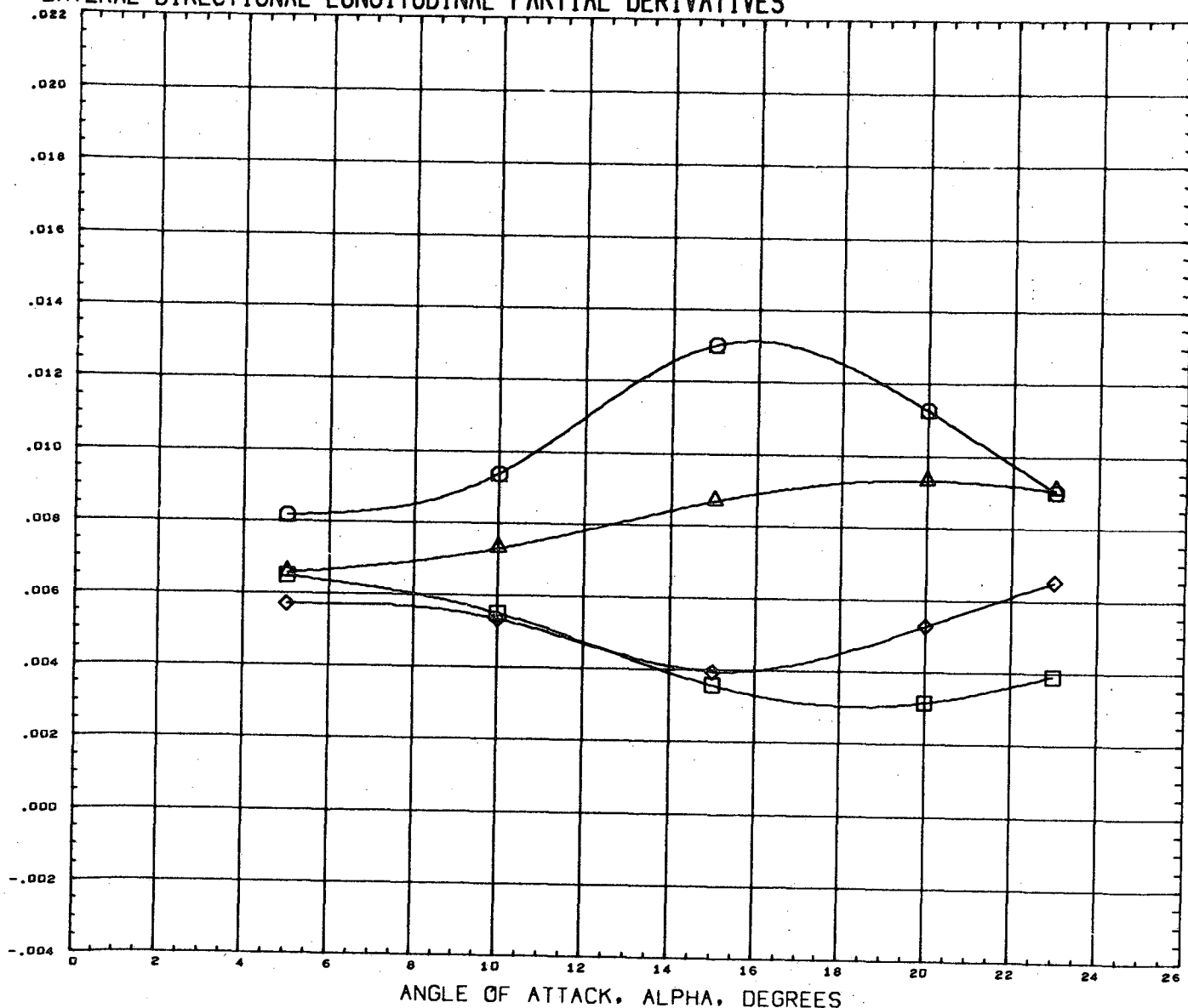


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(X35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(X35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(X35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(X35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.000

ELEVATOR NORMAL FORCE EFFECTIVENESS, DCN/DELEVATOR (DCN/DE) PER DEG.

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES



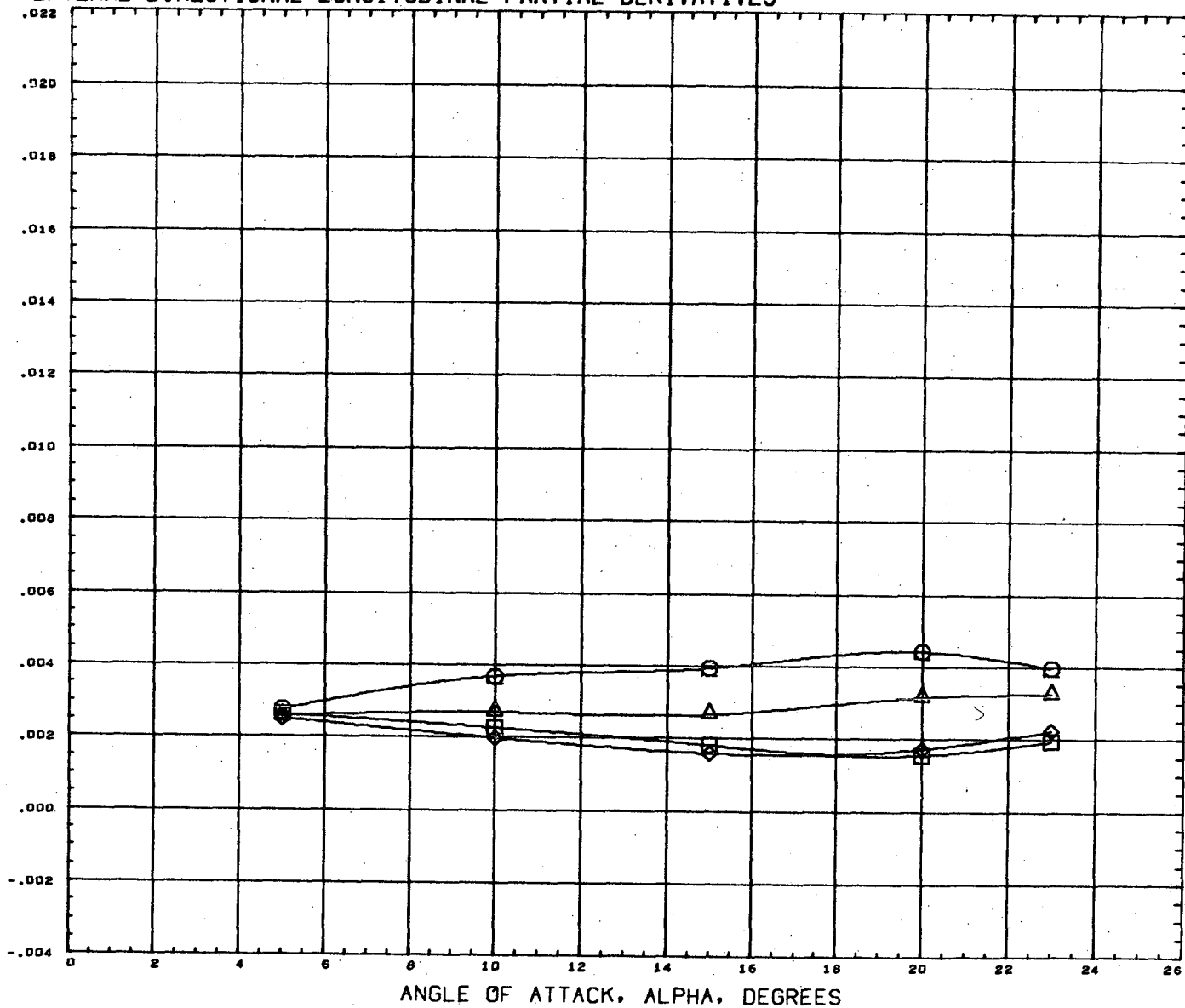
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (X35EAA) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0
 (X35EAO) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0
 (X35EAC) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0
 (X35EAB) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0

BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
0.000	0.000	0.000	0.000	LREF 3.0120 IN.
0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
0.000	-20.000	0.000	0.000	XMRF 7.2990 IN.
				YMRF 0.0000 IN.
				ZMRF 0.0000 IN.
				SCALE 0.0035

MACH 1.200

ELEVATOR NORMAL FORCE EFFECTIVENESS, DCN/ELEVATOR (DCN/DEG) PER DEG.

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES

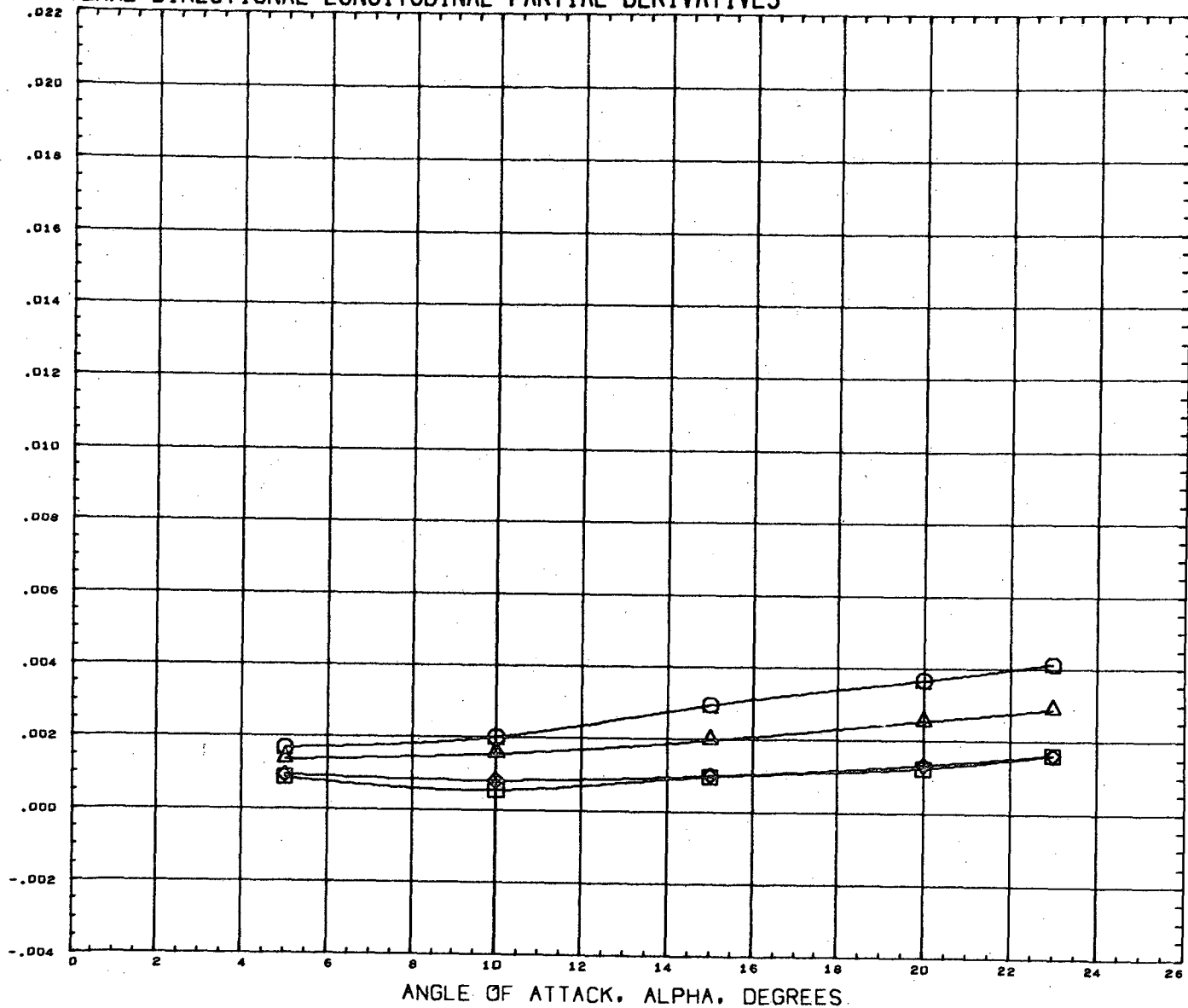


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(X35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	10.000	0.000	0.000	SREF	14.9040 sq.in.
(X35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	0.000	0.000	0.000	LREF	3.0120 in.
(X35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-10.000	0.000	0.000	BREF	6.0180 in.
(X35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP	7.2990 in.
						YMRP	0.0000 in.
						ZMRP	0.0000 in.
						SCALE	0.0035

MACH 2.000

ELEVATOR NORMAL FORCE EFFECTIVENESS, DCN/DELEVATOR (DCN/DE) PER DEG.

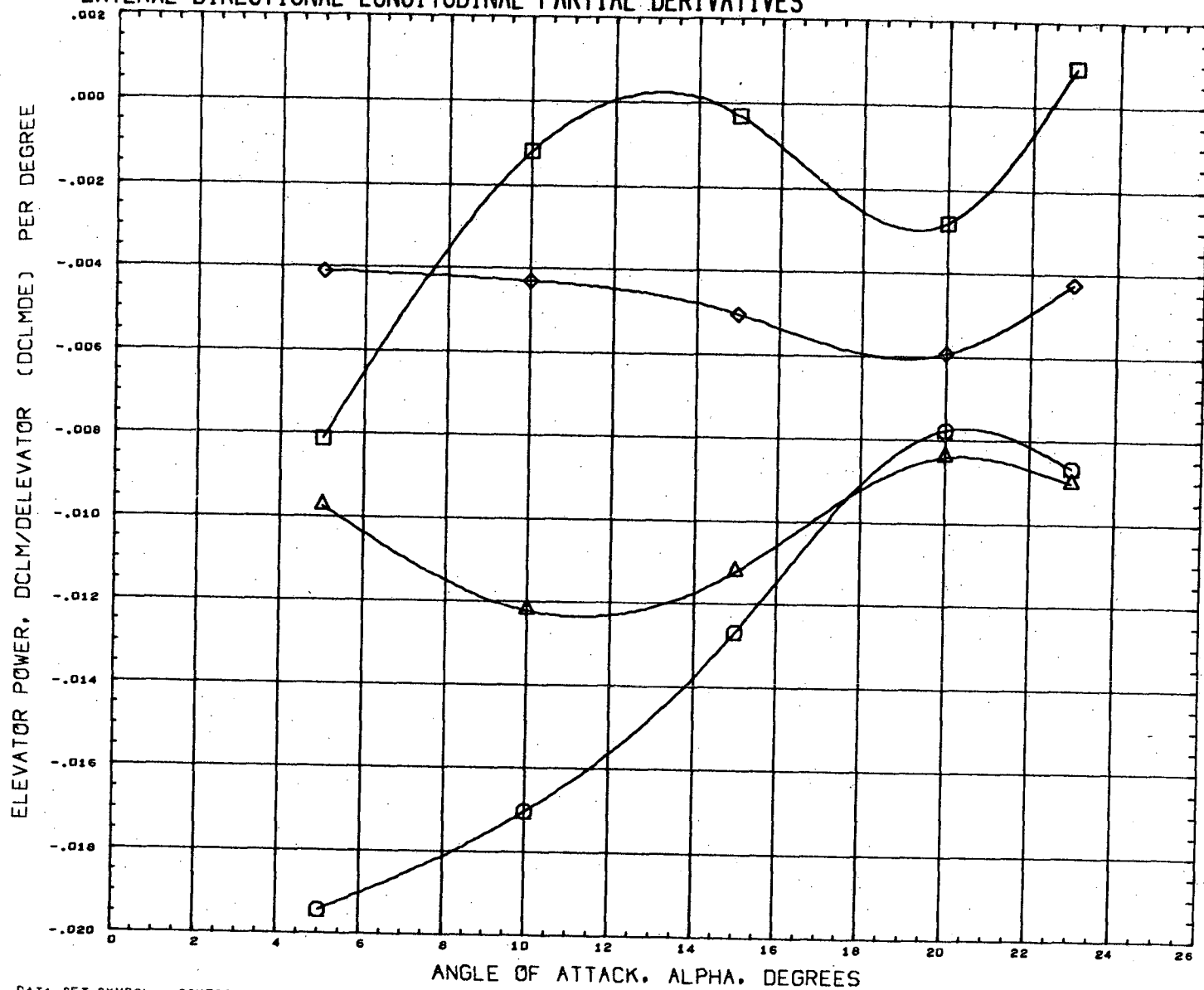
LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(X35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ.IN.
(X35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(X35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(X35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 3.000

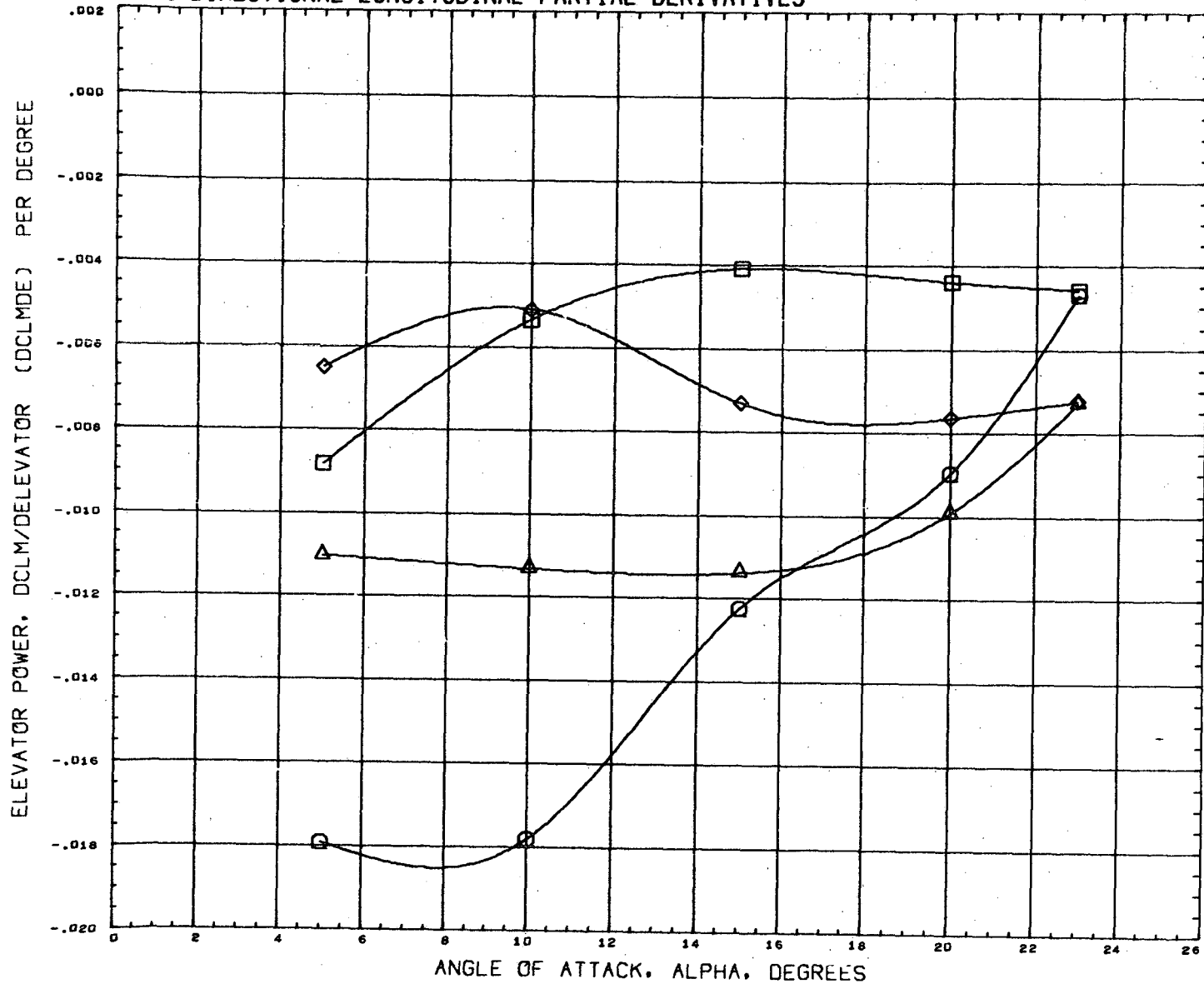
LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(X35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(X35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(X35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(X35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 0.900

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES

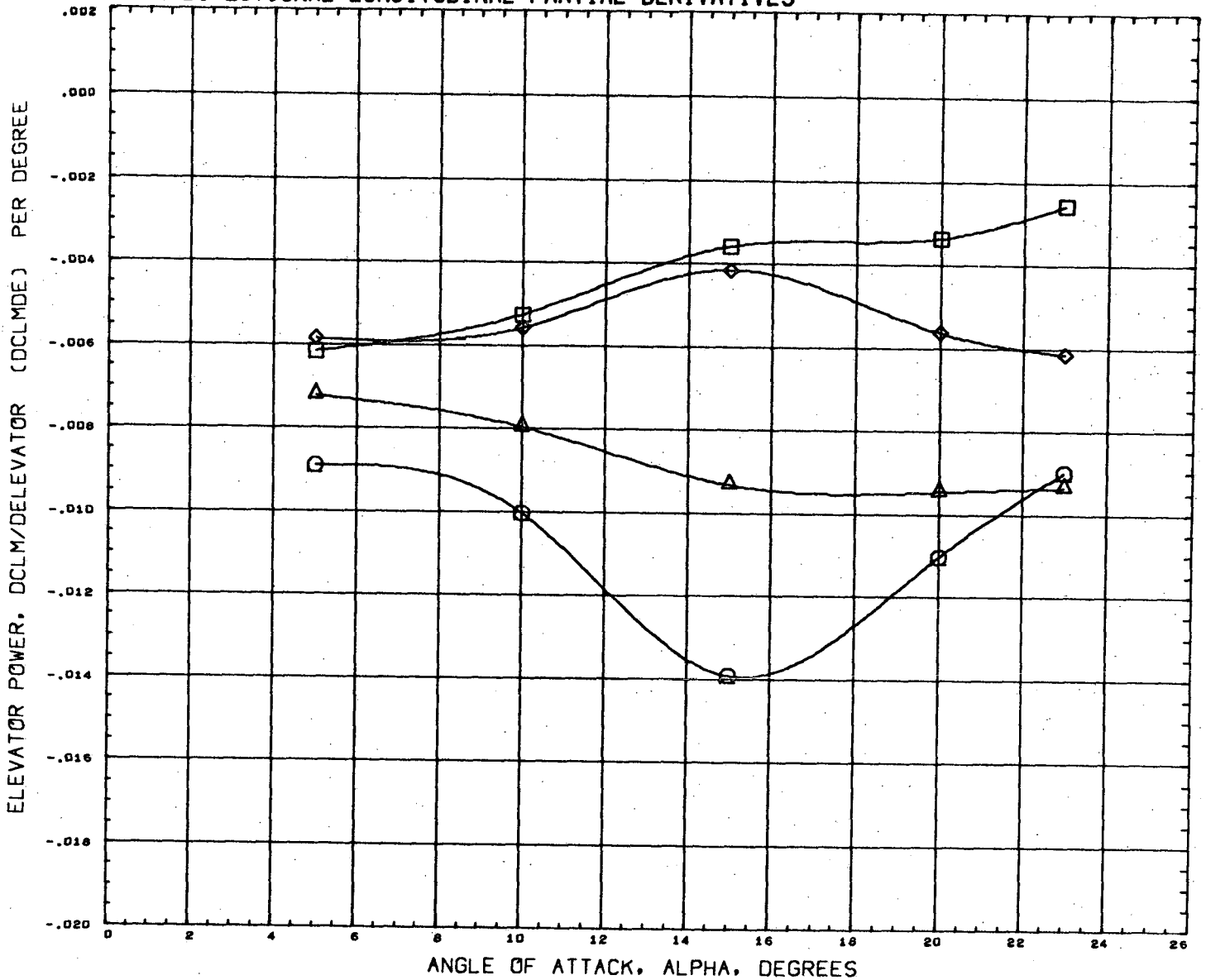


DATA SET SYMBOL CONFIGURATION DESCRIPTION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(X35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(X35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(X35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(X35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.000

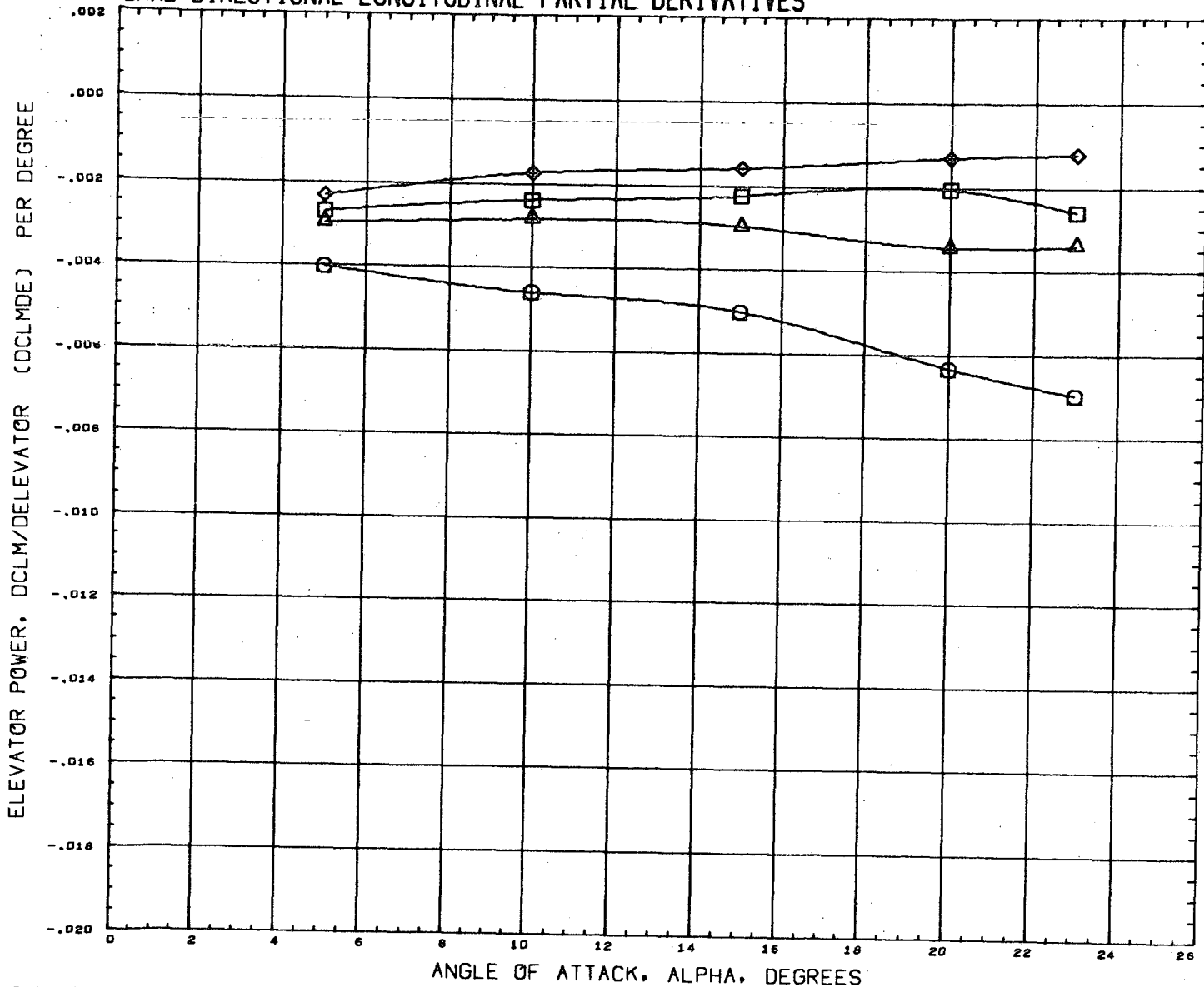
LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(X35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(X35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(X35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(X35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.200

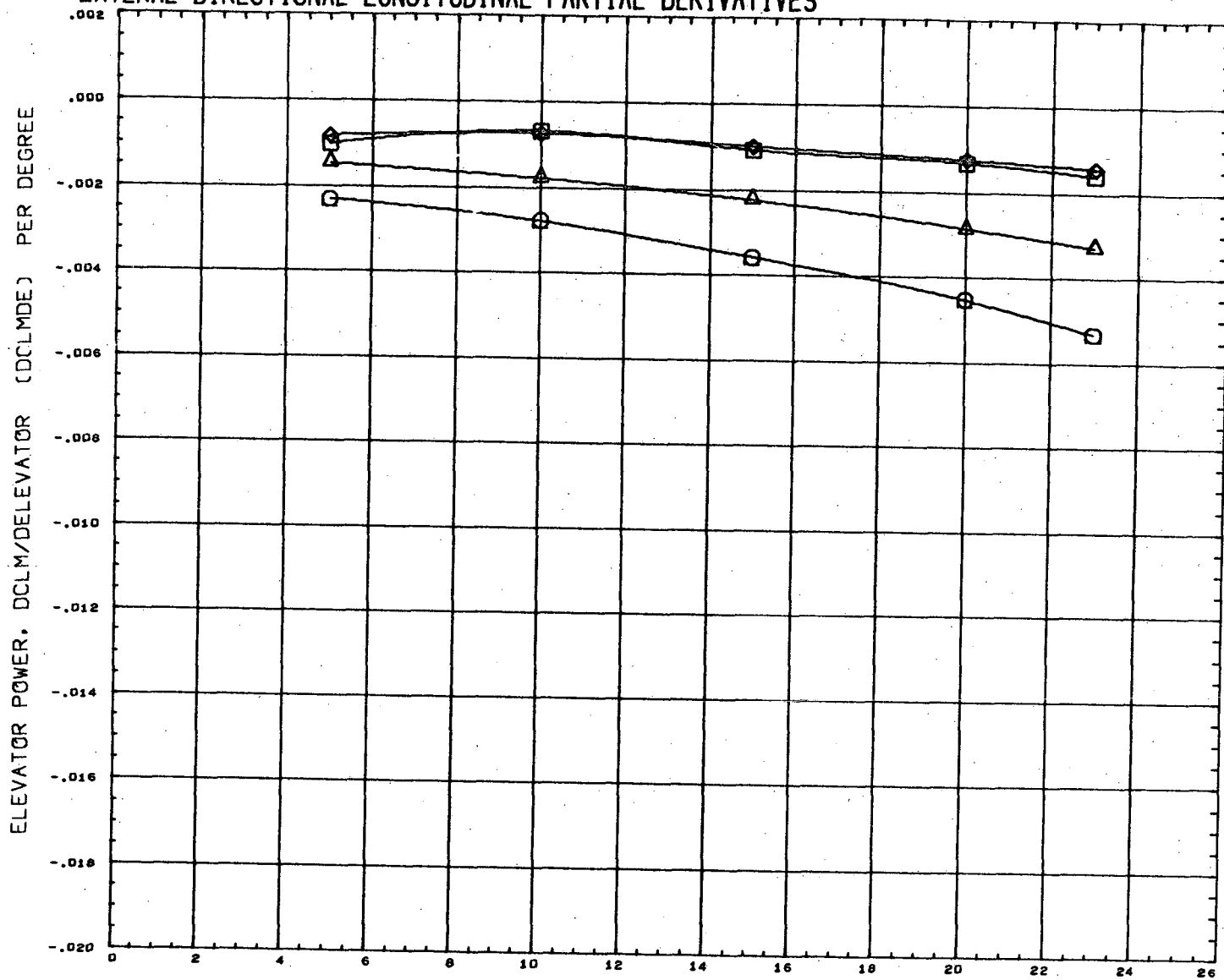
LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(X35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ.IN.
(X35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(X35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(X35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRF 7.2990 IN.
						YMRF 0.0000 IN.
						ZMRF 0.0000 IN.
						SCALE 0.0035

MACH 2.000

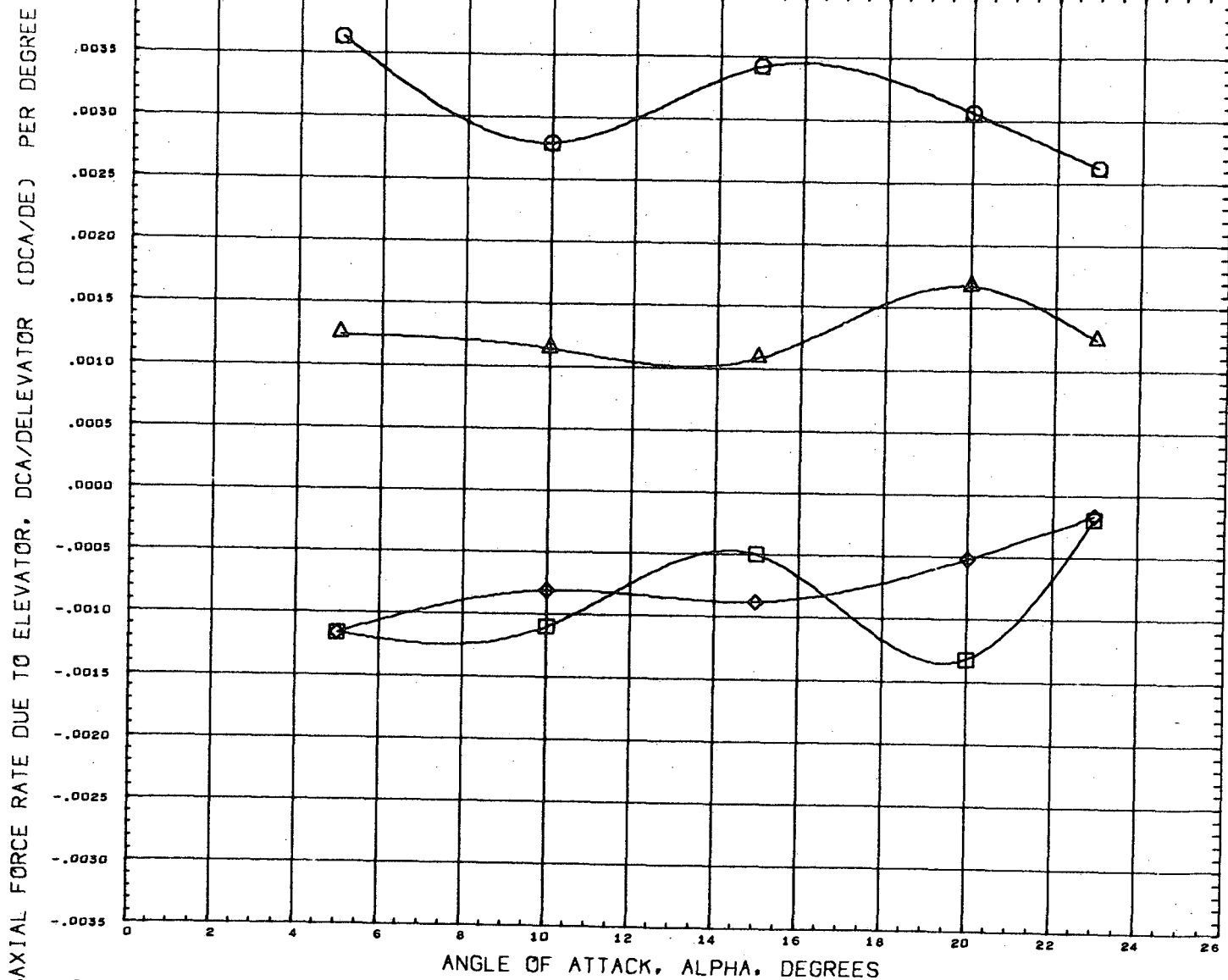
LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(X35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 59 IN.
(X35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(X35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(X35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 3.000

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(X35EAA) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0
 (X35EAO) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0
 (X35EAC) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0
 (X35EAB) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0

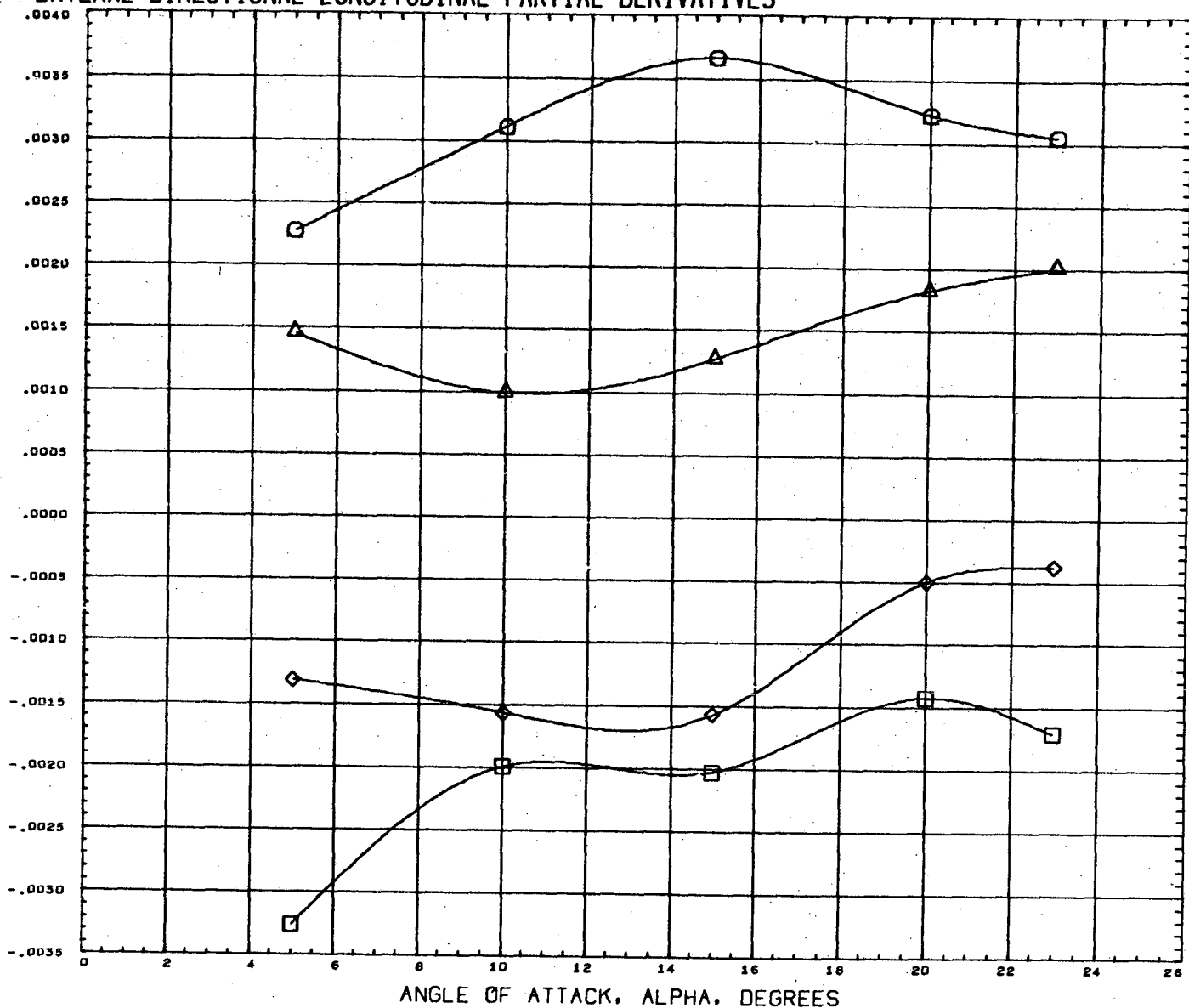
BETA ELEVON CANARD RUDDER
 0.000 10.000 0.000 0.000
 0.000 0.000 0.000 0.000
 0.000 -10.000 0.000 0.000
 0.000 -20.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 0.900

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES

AXIAL FORCE RATE DUE TO ELEVATOR, $\partial C_A / \partial \delta_E$ PER DEGREE



ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (X35EAA) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0
 (X35EAO) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0
 (X35EAC) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0
 (X35EAB) MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0

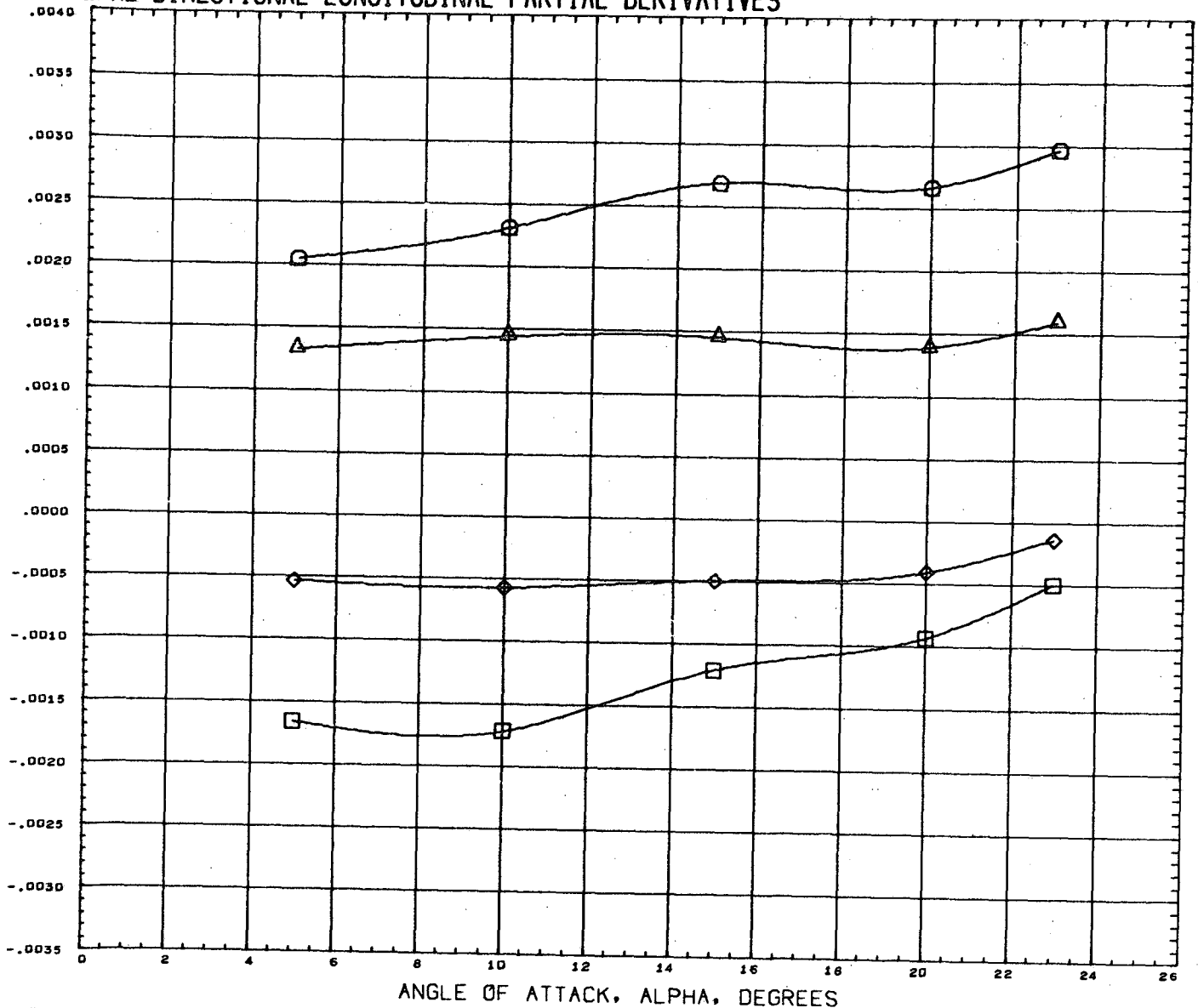
BETA ELEVON CANARD RUDDER
 0.000 10.000 0.000 0.000
 0.000 0.000 0.000 0.000
 0.000 -10.000 0.000 0.000
 0.000 -20.000 0.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 sq. in.
 LREF 3.0120 in.
 BREF 6.0180 in.
 XMRF 7.2990 in.
 YMRF 0.0000 in.
 ZMRF 0.0000 in.
 SCALE 0.0035

MACH 1.000

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES

AXIAL FORCE RATE DUE TO ELEVATOR, DCA/DELEVATOR (DCA/DE) PER DEGREE



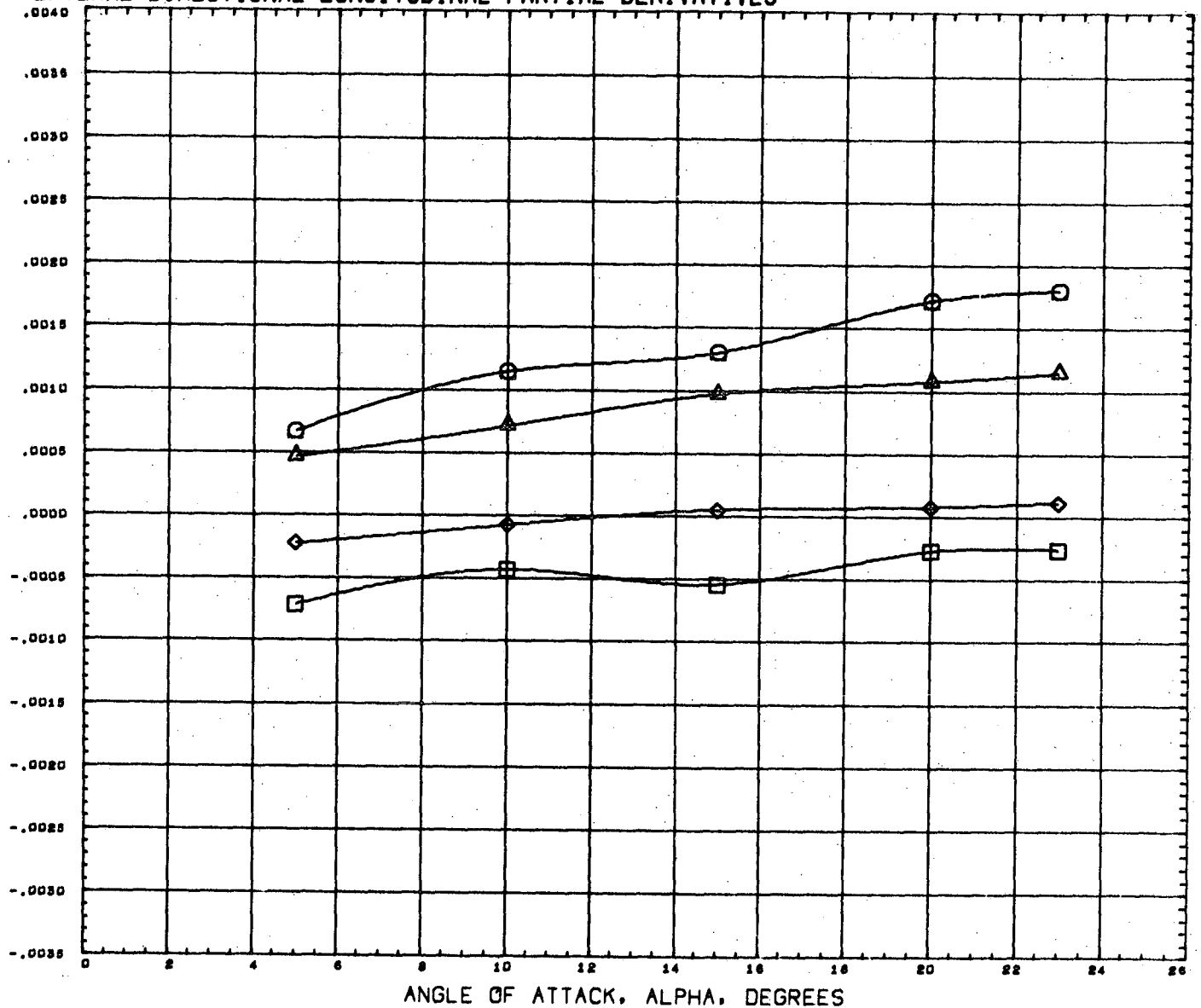
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(X35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ. IN.
(X35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(X35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 IN.
(X35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH

1.200

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES

AXIAL FORCE RATE DUE TO ELEVATOR, $dC_A/d\delta$ PER DEGREE

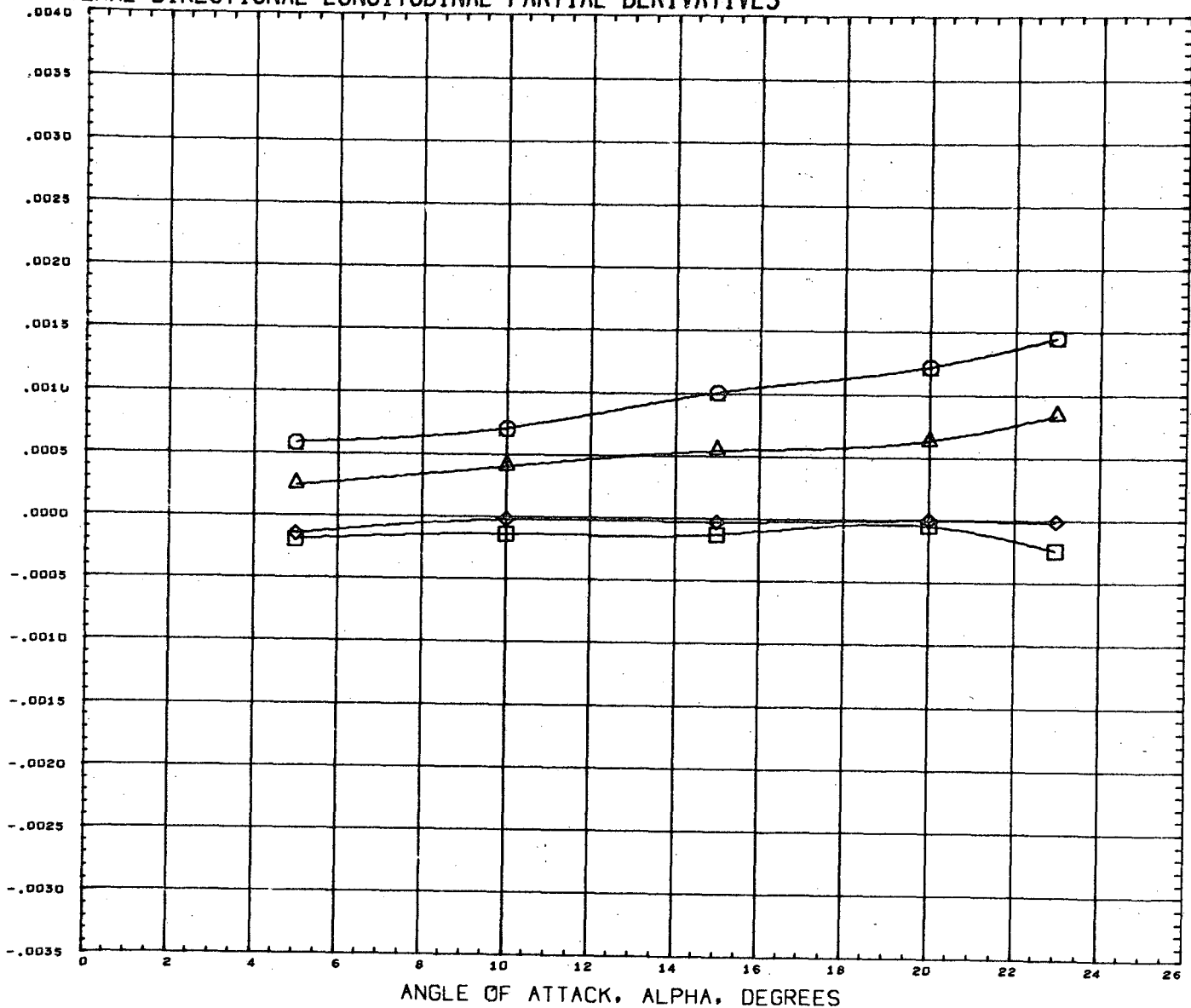


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(X35EAA)	M&FC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 sq. in.
(X35EAC)	M&FC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 in.
(X35EAC)	M&FC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0180 in.
(X35EAB)	M&FC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 in.
						YMRP 0.0000 in.
						ZMRP 0.0000 in.
						SCALE 0.0035

MACH 2.000

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES

AXIAL FORCE RATE DUE TO ELEVATOR, $\partial C_A / \partial \delta E$ PER DEGREE

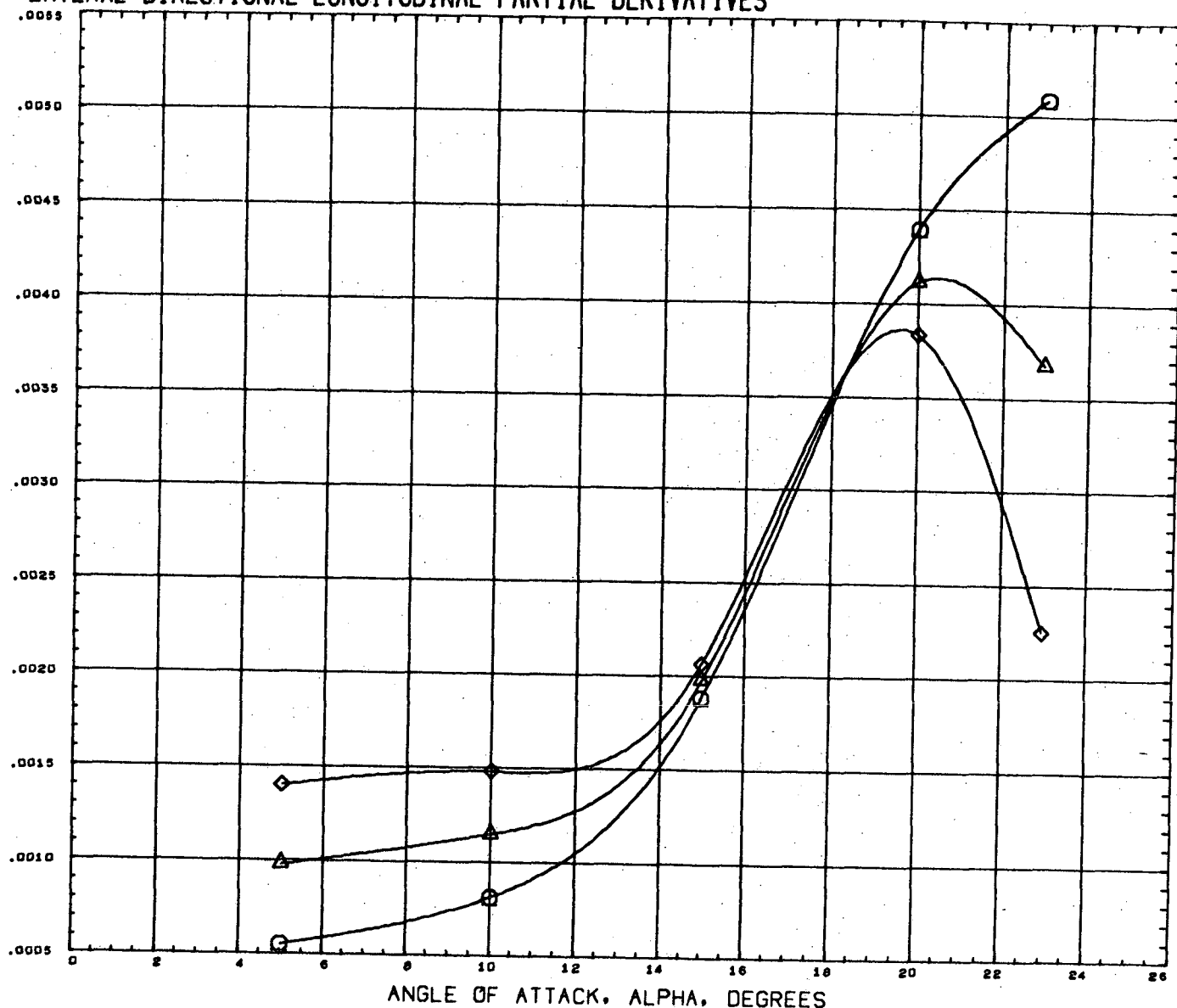


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(X35EAA)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	10.000	0.000	0.000	SREF 14.9040 SQ.IN.
(X35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	0.000	0.000	0.000	LREF 3.0120 IN.
(X35EAC)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-10.000	0.000	0.000	BREF 6.0100 IN.
(X35EAB)	MSFC TWT-493 GD/C B25W19C8V10 E=-20 C=0 R=0	0.000	-20.000	0.000	0.000	XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 3.000

CANARD NORMAL FORCE EFFECTIVENESS, DCN/DC (DCN/DC) PER DEGREE

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES



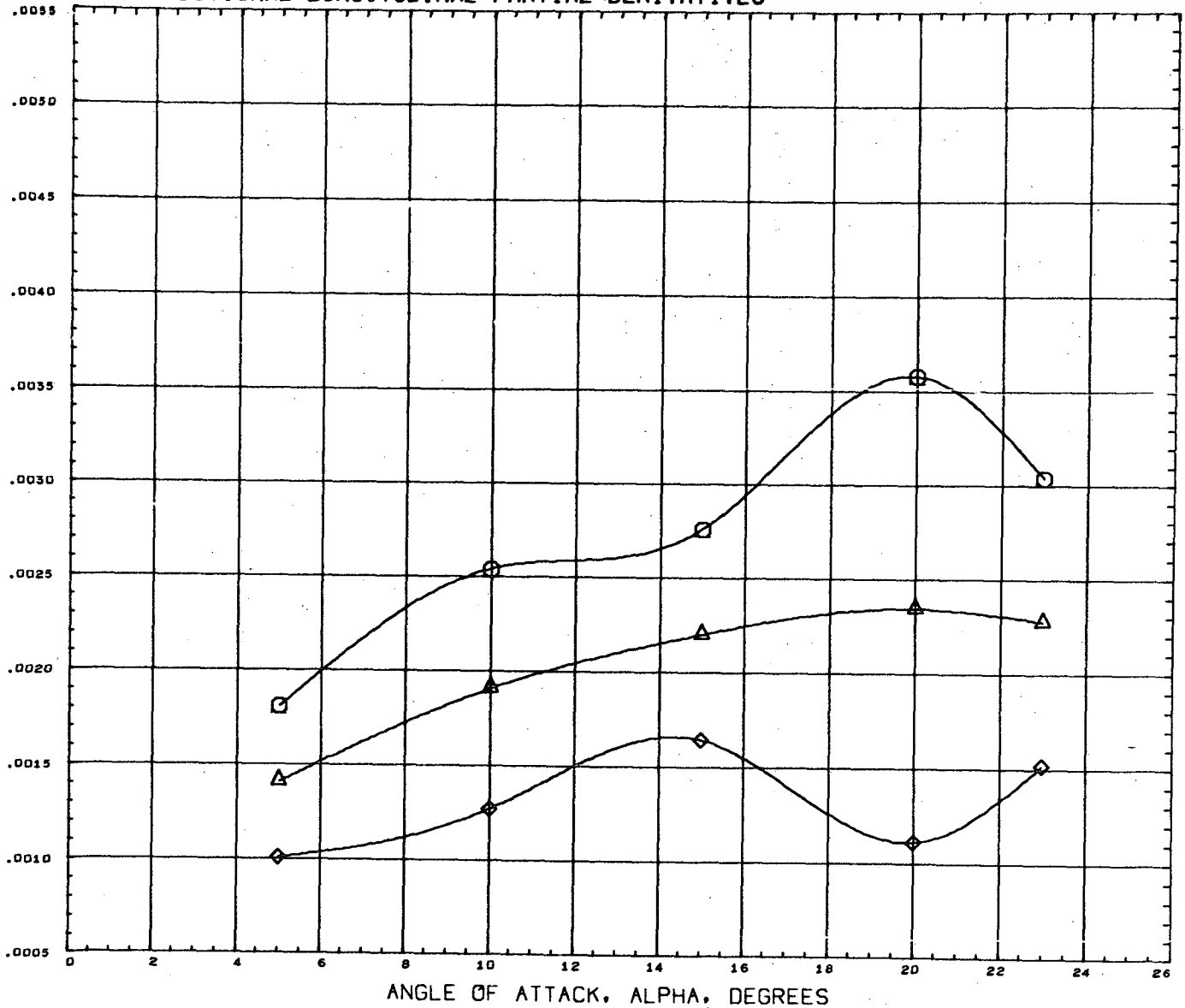
ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(Y35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(Y35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120 IN.
(Y35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0160 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 0.900

CANARD NORMAL FORCE EFFECTIVENESS, DCN/DCANARD (DCN/DC) PER DEGREE

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES

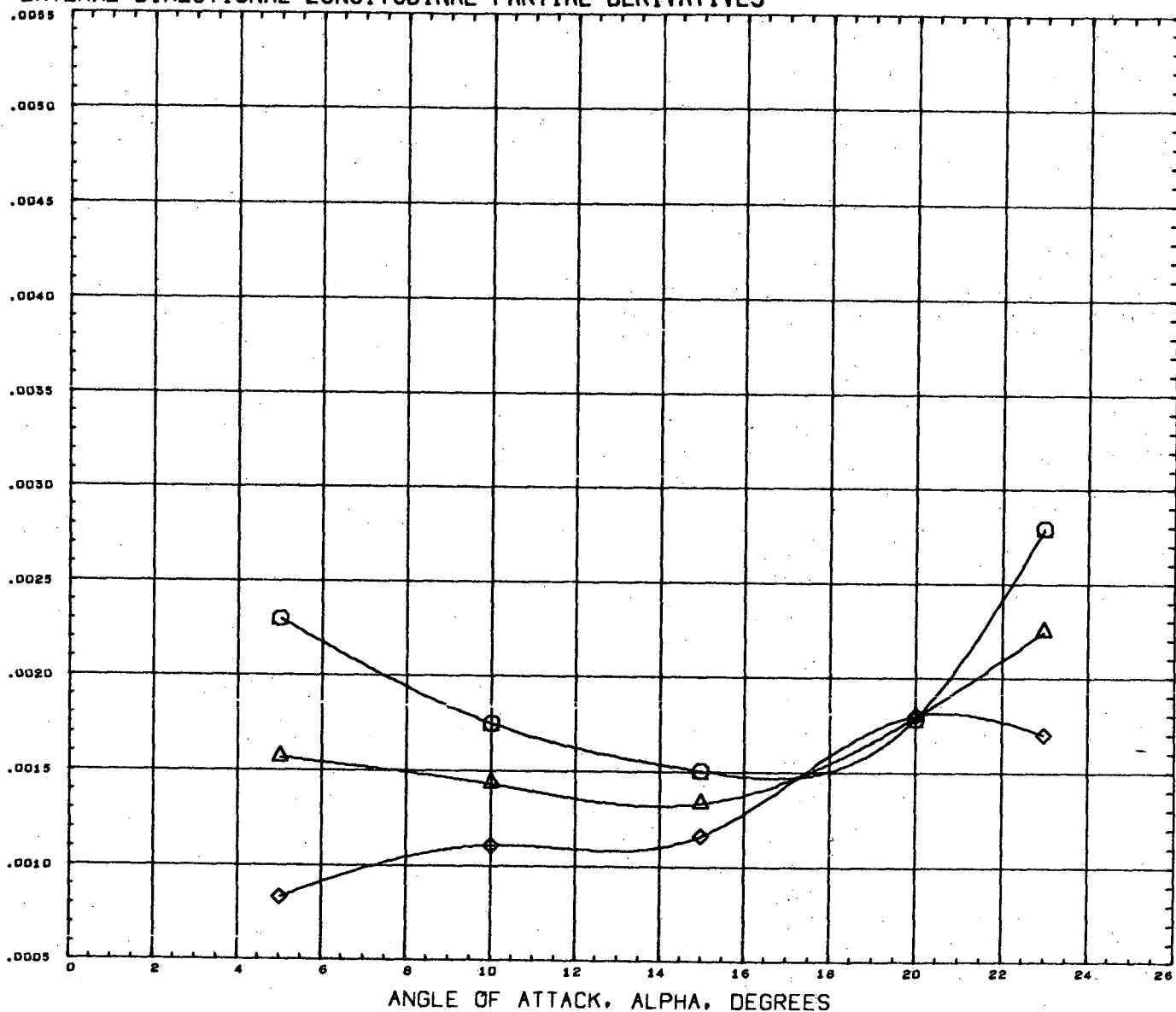


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(Y35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ.IN.
(Y35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(Y35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.200

CANARD NORMAL FORCE EFFECTIVENESS, DCN/DCANARD (DCN/DC) PER DEGREE

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES

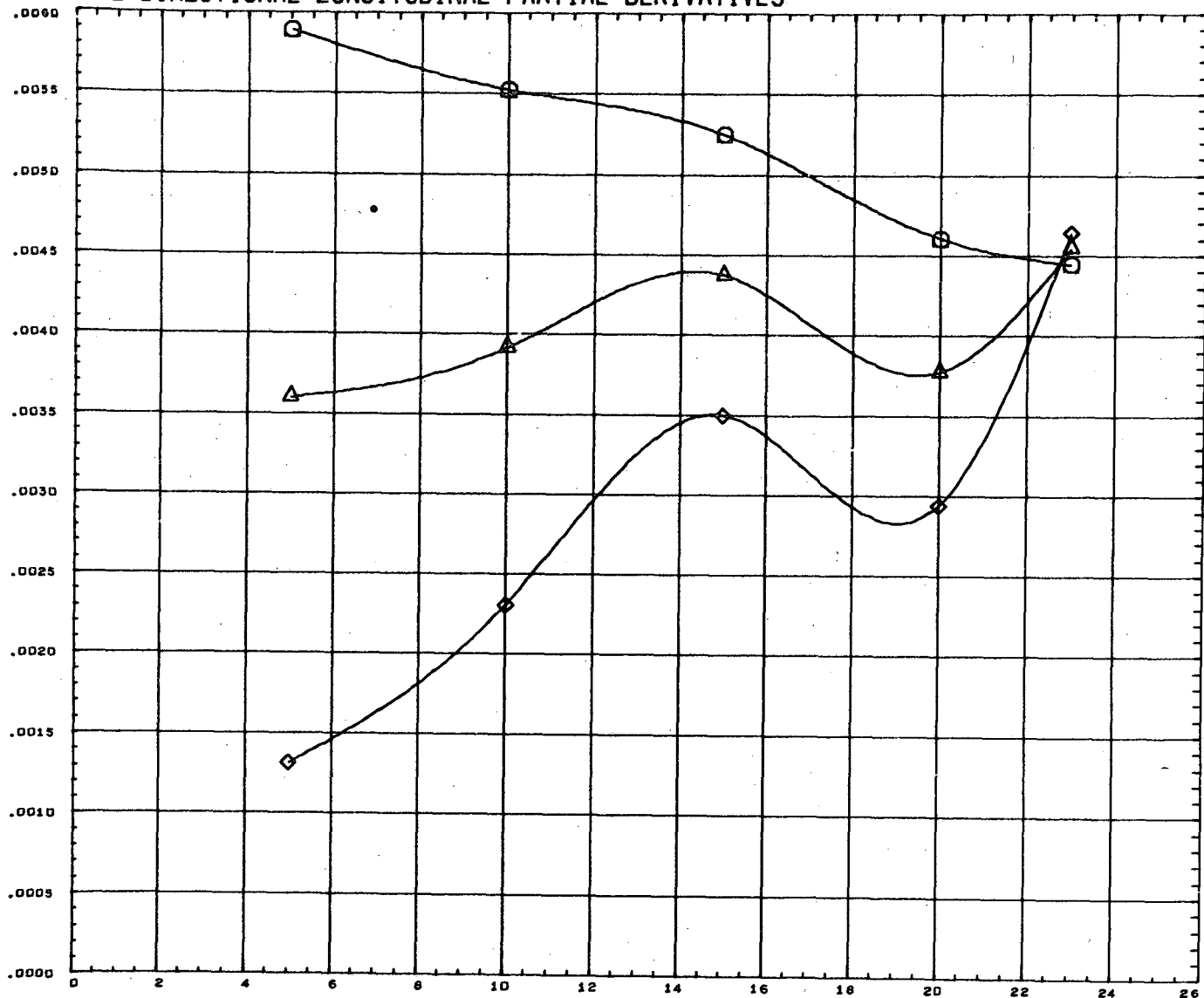


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION	
(Y35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=D C=-30 R=0	0.000	0.000	0.000	0.000	SREF	14.9040 SQ. IN.
(Y35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=D C=-30 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120 IN.
(Y35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=D C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0160 IN.
						XMRP	7.2990 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0035

MACH 2.000

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES

CANARD POWER, DCLM/DCANARD (DCLMDC) PER DEGREE



ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(Y35EAO) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0
 (Y35CAA) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0
 (Y35CAB) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0

BETA

ELEVON

CANARD

RUDDER

REFERENCE INFORMATION

0.000

0.000

0.000

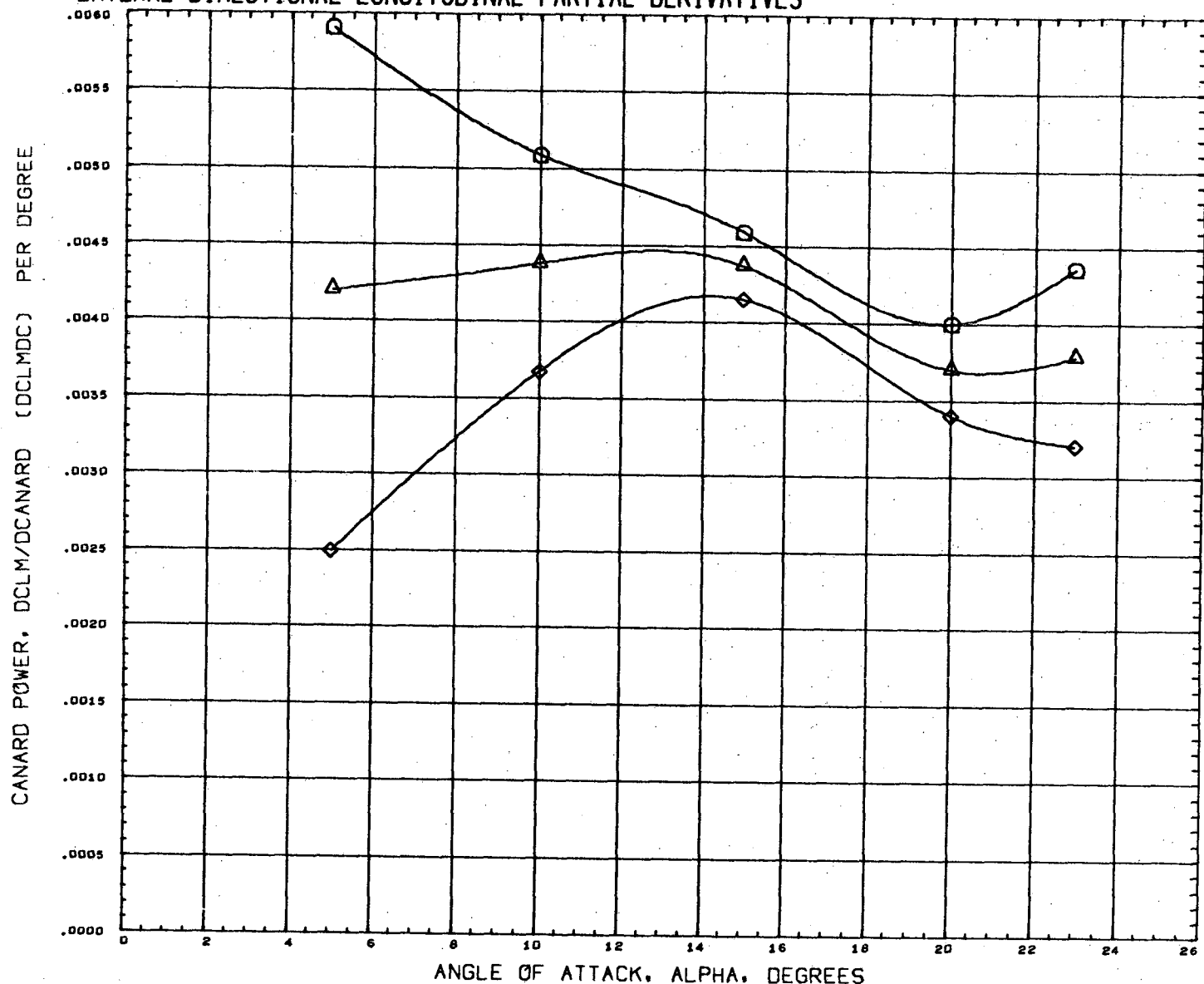
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SREF 14.9040 SQ. IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRF 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH

0.900

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES

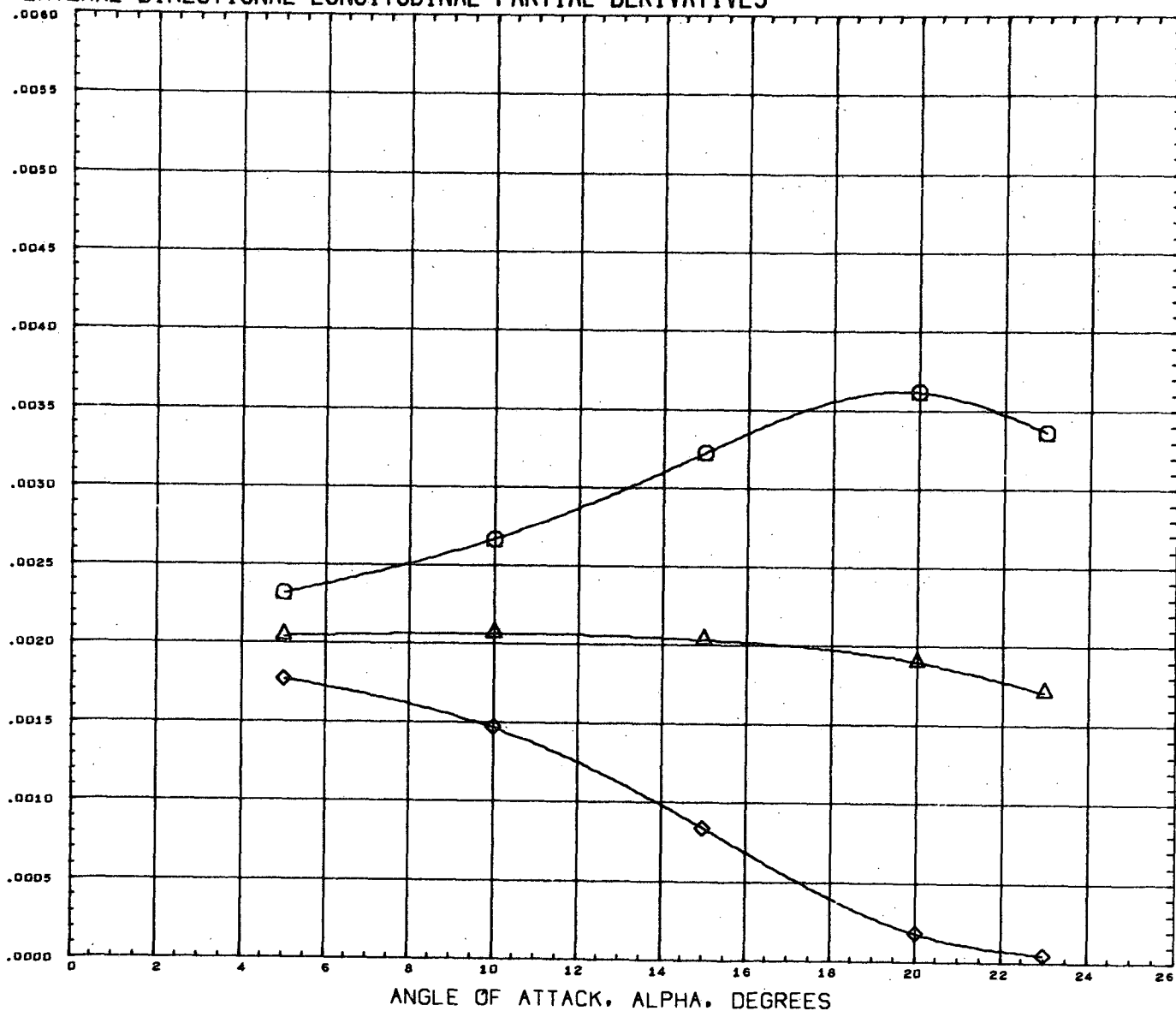


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION		
(Y35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	0.000	0.000	SREF	14.9040	Sq. IN.
(Y35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120	IN.
(Y35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0180	IN.
						XMRP	7.2990	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0035	

MACH 1.200

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES

CANARD POWER, DCLM/DCANARD (DCLMDC) PER DEGREE



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(Y35EAO) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0
 (Y35CAA) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0
 (Y35CAB) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0

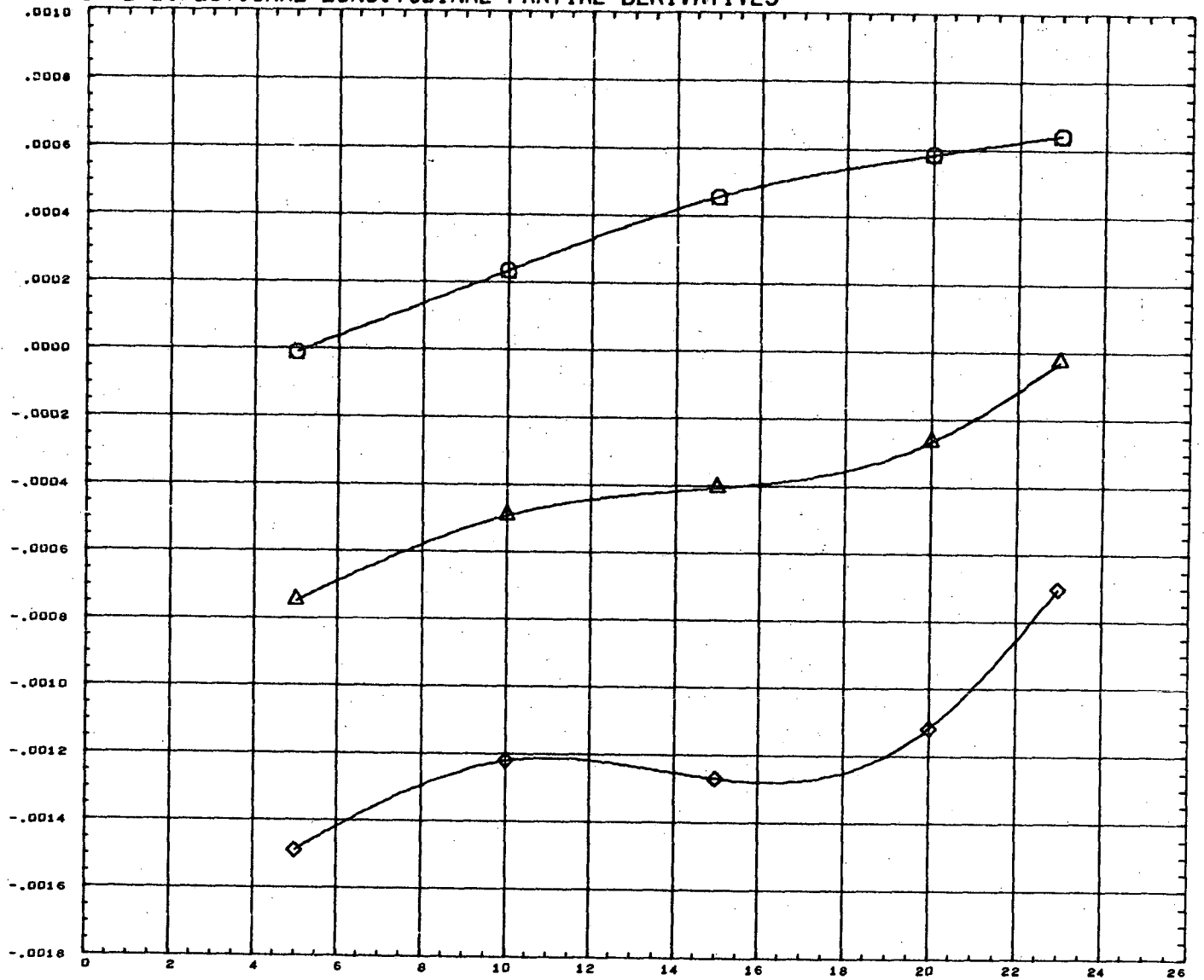
BETA ELEVON CANARD RUDDER
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 0.000 0.000 -15.000 0.000
 0.000 0.000 -30.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ.IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 2.000

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES

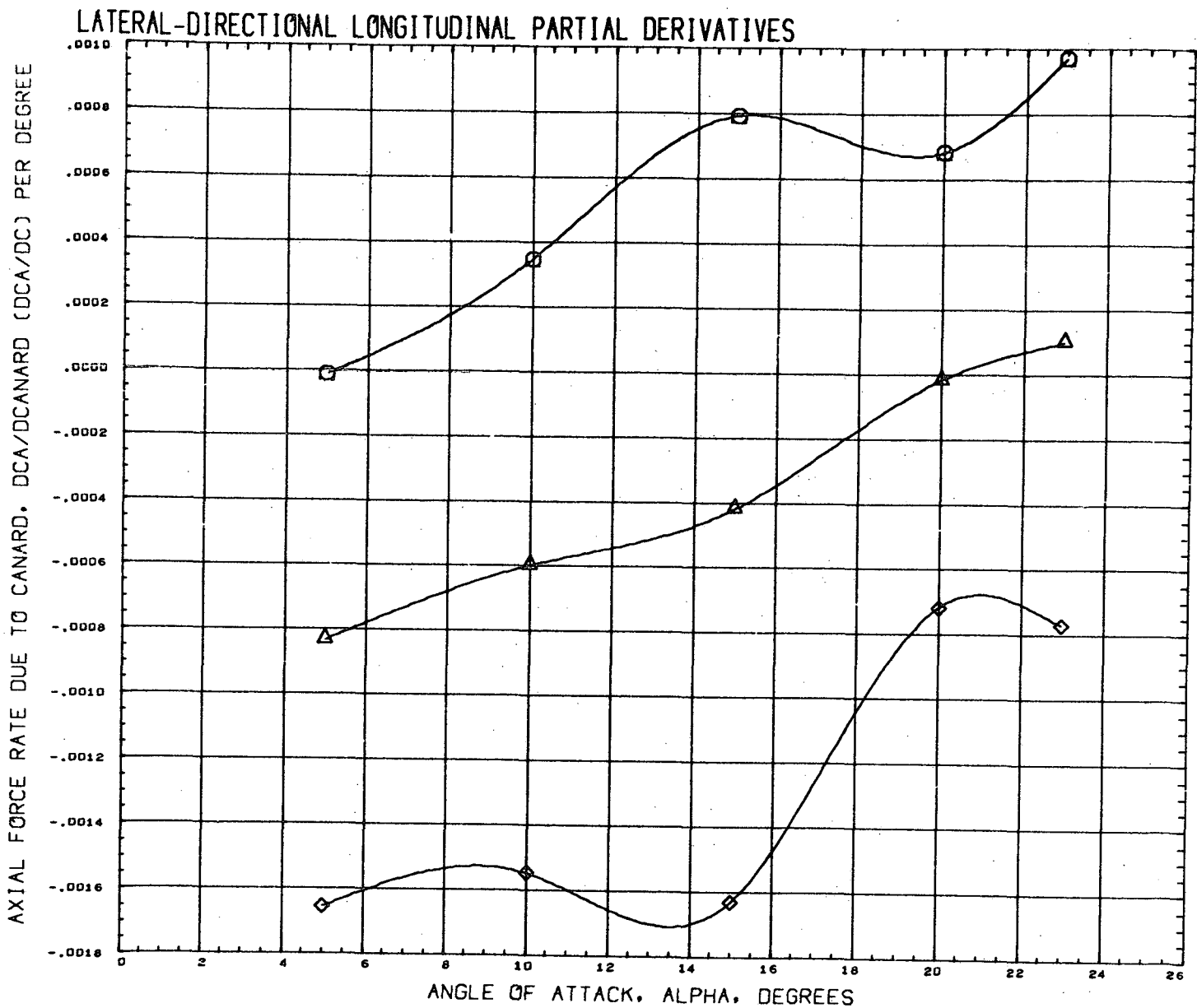
AXIAL FORCE RATE DUE TO CANARD, DCA/DCANARD (DCA/DC) PER DEGREE



ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION		
(Y35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	0.000	0.000	SREF	14.9040	SQ. IN.
(Y35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-15.000	0.000	LREF	3.0120	IN.
(Y35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF	6.0180	IN.
						XMRF	7.2990	IN.
						YMRF	0.0000	IN.
						ZMRF	0.0000	IN.
						SCALE	0.0035	

MACH 0.900

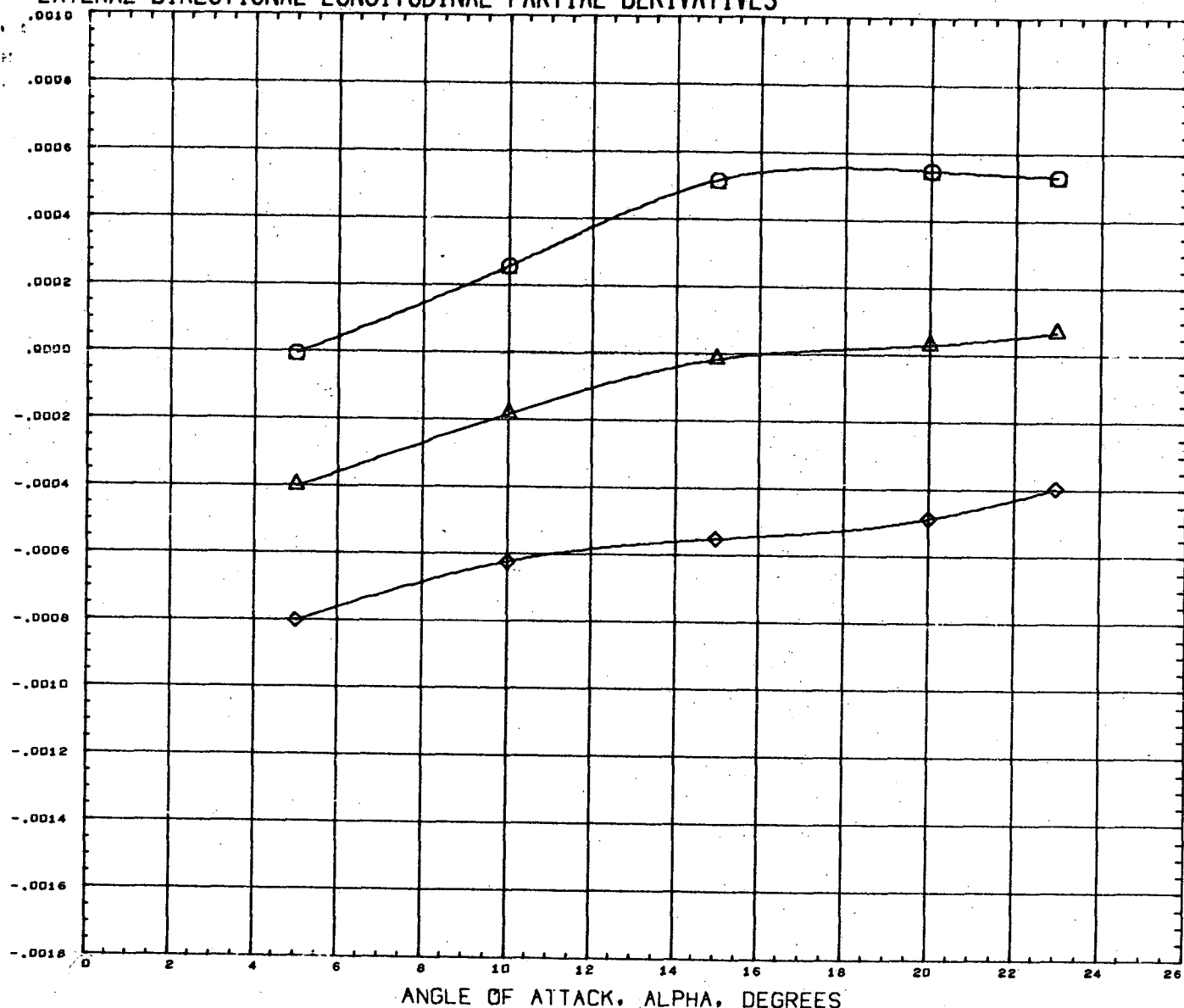


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	CANARD	RUDDER	REFERENCE INFORMATION
(Y35EAO)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	0.000	0.000	SREF 14.9040 SQ.IN.
(Y35CAA)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-15.000	0.000	LREF 3.0120 IN.
(Y35CAB)	MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0	0.000	0.000	-30.000	0.000	BREF 6.0180 IN.
						XMRP 7.2990 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0035

MACH 1.200

LATERAL-DIRECTIONAL LONGITUDINAL PARTIAL DERIVATIVES

AXIAL FORCE RATE DUE TO CANARD, DCA/DCANARD (DCA/DC) PER DEGREE



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(Y35EAO) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0
 (Y35CAA) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0
 (Y35CAB) MSFC TWT-493 GD/C B25W19C8V10 E=0 C=-30 R=0

BETA ELEVON CANARD RUDDER
 0.000 0.000 0.000 0.000
 0.000 0.000 -15.000 0.000
 0.000 0.000 -30.000 0.000

REFERENCE INFORMATION
 SREF 14.9040 SQ.IN.
 LREF 3.0120 IN.
 BREF 6.0180 IN.
 XMRP 7.2990 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0035

MACH 2.000